





TITLE: New and usual surfactants		INVENTOR(S): Switchenko, Arthur C., Mountain View, CA, United States	
AUTHOR(S): Menger, Fredric M.		Kurn, Nurith, Palo Alto, CA, United States	
CORPORATE SOURCE: Department of Chemistry, Emory University, Atlanta, GA, 30322, USA		Neukom, Christian, Mountain View, CA, United States	
SOURCE: Book of Abstracts, 217th ACS National Meeting, Anaheim, Calif., March 21-25 (1999), ANYL-155, American Chemical Society: Washington, D. C.		Pirio, Marcel, San Jose, CA, United States	
CODEN: 6TGHA6		Berger, Jr., Donald E., San Jose, CA, United States	
CONFERENCE: Meeting Abstract		Ulman, Edwin F., Atherton, CA, United States	
DOCUMENT TYPE: LANGUAGE: English		Behring Diagnostics GmbH, Marburg, Germany, Federal Republic of (non-U.S. corporation)	
L4 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN		DOCUMENT TYPE: FILE SEGMENT: -----	
ACCESSION NUMBER: 1999146338 HCAPLUS Full-text		PATENT INFORMATION: APPLICATION INFO: -----	
TITLE: New and unusual surfactants		US 5540508 US 1995455424	
AUTHOR(S): Menger, F. M.		Division of Ser. No. US 1993-154310, filed on 18 Nov 1993, now patented. Pat. No. US 5563038 which is a continuation of Ser. No. US 1992-879655, filed on 6 May 1988-22501, filed on 25 Jul 1988, now patented. Pat. No. US 5116726, issued on 26 May 1992	
CORPORATE SOURCE: Department of Chemistry, Emory University, Atlanta, GA, 30322, USA		Utility Granted	
SOURCE: Book of Abstracts, 217th ACS National Meeting, Anaheim, Calif., March 21-25 (1999), ANYL-136, American Chemical Society: Washington, D. C.		PRIMARY EXAMINER: leitereg, Theodore J.	
CODEN: 6TGHA6		NUMBER OF CLAIMS: 29	
CONFERENCE: Meeting Abstract		EXEMPLARY CLAIM: 1	
DOCUMENT TYPE: LANGUAGE: English		LINE COUNT: 1126	
AB Expts. with synthetic surfactants and lipids will be briefly described.		CRS INDEXING IS AVAILABLE FOR THIS PATENT.	
Included will be: (a) amphiphiles with totally rigid hydrocarbon chains; (b) a surfactant that glues cells to vesicles; (c) surfactants with counterions of glucuronate glycosides; (d) a simple destructible surfactant; (e) a "defective" phospholipid; (f) gemini surfactants; and (g) a fiber-forming surfactant.		SUMM . extraction procedures in surfactant-based organized media containing micelles, inverse micelles, and microemulsions. After the preparative reaction has taken place, the destructible surfactant is converted to nonsurfactant products under mild conditions.	
L4 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN		DOCUMENT TYPE: FILE SEGMENT: -----	
ACCESSION NUMBER: 1999140450 HCAPLUS Full-text		PATENT INFORMATION: APPLICATION INFO: -----	
TITLE: New and unusual surfactants		US 97-86796 USPATFULL Full-text	
AUTHOR(S): Menger, F. M.		Switchenko, Arthur C., Palo Alto, CA, United States	
CORPORATE SOURCE: Department of Chemistry, Emory University, Atlanta, GA, 30322, USA		Kurn, Nurith, Palo Alto, CA, United States	
SOURCE: Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), C001-003, American Chemical Society: Washington, D. C.		Pirio, Marcel, San Jose, CA, United States	
DOCUMENT TYPE: LANGUAGE: English		Berger, Jr., Donald E., San Jose, CA, United States	
AB Expts. with synthetic amphiphiles will be described. Included will be: (a) surfactants with totally rigid hydrocarbon chains; (b) a surfactant that glues vesicles to cells; (c) a variety of new gemini surfactants; (d) a simple destructible surfactant; (e) a fiber-forming surfactant; (f) a hyperextended surfactant.		Ulman, Edwin F., Atherton, CA, United States	
DOCUMENT TYPE: LANGUAGE: English		Behringwerke AG, Marburg, Germany, Federal Republic of (non-U.S. corporation)	
L4 ANSWER 9 OF 15 USPATFULL on STN		DOCUMENT TYPE: FILE SEGMENT: -----	
ACCESSION NUMBER: 97-86796 USPATFULL Full-text		PATENT INFORMATION: APPLICATION INFO: -----	
TITLE: Compositions and methods for removal of detergents		Switchenko, Arthur C., Palo Alto, CA, United States	
INVENTOR(S):		Kurn, Nurith, Palo Alto, CA, United States	
DOCUMENT TYPE: LANGUAGE: English		Pirio, Marcel, San Jose, CA, United States	
AB Expts. with synthetic amphiphiles will be described. Included will be: (a) surfactants with totally rigid hydrocarbon chains; (b) a surfactant that glues vesicles to cells; (c) a variety of new gemini surfactants; (d) a simple destructible surfactant; (e) a fiber-forming surfactant; (f) a hyperextended surfactant.		Berger, Jr., Donald E., San Jose, CA, United States	
DOCUMENT TYPE: LANGUAGE: English		Ulman, Edwin F., Atherton, CA, United States	
AB Expts. with synthetic amphiphiles will be described. Included will be: (a) surfactants with totally rigid hydrocarbon chains; (b) a surfactant that glues vesicles to cells; (c) a variety of new gemini surfactants; (d) a simple destructible surfactant; (e) a fiber-forming surfactant; (f) a hyperextended surfactant.		Behringwerke AG, Marburg, Germany, Federal Republic of (non-U.S. corporation)	
DOCUMENT TYPE: LANGUAGE: English		DOCUMENT TYPE: FILE SEGMENT: -----	
AB Expts. with synthetic amphiphiles will be described. Included will be: (a) surfactants with totally rigid hydrocarbon chains; (b) a surfactant that glues vesicles to cells; (c) a variety of new gemini surfactants; (d) a simple destructible surfactant; (e) a fiber-forming surfactant; (f) a hyperextended surfactant.		PATENT INFORMATION: APPLICATION INFO: -----	
DOCUMENT TYPE: LANGUAGE: English		US 5670650 US 1995455920	
AB Expts. with synthetic amphiphiles will be described. Included will be: (a) surfactants with totally rigid hydrocarbon chains; (b) a surfactant that glues vesicles to cells; (c) a variety of new gemini surfactants; (d) a simple destructible surfactant; (e) a fiber-forming surfactant; (f) a hyperextended surfactant.		Division of Ser. No. US 1993-154310, filed on 18 Nov 1993, now patented. Pat. No. US 5563038 which is a continuation of Ser. No. US 1992-879655, filed on 6 May 1992, now abandoned which is a division of Ser. No. US 1988-22501, filed on 25 Jul 1988, now patented. Pat. No. US 5116726, issued on 26 May 1992	
DOCUMENT TYPE: LANGUAGE: English		Utility Granted	
AB Expts. with synthetic amphiphiles will be described. Included will be: (a) surfactants with totally rigid hydrocarbon chains; (b) a surfactant that glues vesicles to cells; (c) a variety of new gemini surfactants; (d) a simple destructible surfactant; (e) a fiber-forming surfactant; (f) a hyperextended surfactant.		PRIMARY EXAMINER: leitereg, Theodore J., Peties, Rohan	
DOCUMENT TYPE: LANGUAGE: English		NUMBER OF CLAIMS: 1	
L4 ANSWER 8 OF 15 USPATFULL on STN		DOCUMENT TYPE: FILE SEGMENT: -----	
ACCESSION NUMBER: 1998147231 USPATFULL Full-text		PATENT INFORMATION: APPLICATION INFO: -----	
TITLE: Compositions and methods for removal of detergents		US 5670650 US 1995455920	



to acceptable levels by curing the coating to drive the siloxane condensation to completion while leaving.

DETD

Thus the advantages of a deconstructible surfactant in forming repellent coatings are 1) increased ambient cure oil repellency, 2) improved water repellency after heating, 3) less sensitivity, and 4) improved oil repellency after heating.

CLM

What is claimed is:

1. a polyoxalkylene alcohol with a polyfluoroaliphatic halosilane, a polyfluoroaliphatic alkoxy silane, a polyfluoroaliphatic bis(alkoxysilane) or a polyfluoroaliphatic bis(hilosilane), to provide a deconstructible surfactant.

24. The method according to claim 20 further comprising the step of hydrolyzing said deconstructible surfactant in the presence of a substrate so as to provide a water- and oil-repellent coating on said substrate or to.

L4 ANSWER 13 OF 15 USPATFULL on STN

ACCESSION NUMBER: 92:42652 USPATFULL Full-text

TITLE: Methods for removal of detergents from analytes

INVENTOR(S): Swiatchenko, Arthur C., Mountain View, CA, United States

Kurnik, Nurith, Palo Alto, CA, United States

Neukom, Christian, Mountain View, CA, United States

Pirio, Marcel, San Jose, CA, United States

Berger, Jr., Donald E., San Jose, CA, United States

Ullman, Edwin F., Atherton, CA, United States

Syntex (U.S.A.) Inc., Palo Alto, CA, United States

(U.S. Corporation)

NUMBER KIND DATE

US 5116726 19920526

US 1988-223501 19880725 (7)

Utility Granted

FILE SEGMENT:

PRIMARY EXAMINER:

Rosen, Sam

LEGAL REPRESENTATIVE:

Leiterer, Theodore J.

NUMBER OF CLAIMS:

52

EXEMPLARY CLAIM:

1 LINE COUNT: 1108

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM extraction procedures in surfactant-based organized media containing micelles, inverse micelles, and microemulsions. After the preparative reaction has taken place, the deconstructible surfactant is converted to nonsurfactant products under mild conditions.

L4 ANSWER 14 OF 15 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on

STN ACCESSION NUMBER: 1985-135632 BIOSIS Full-text

DOCUMENT NUMBER: PR0V19829025628; BR21:2528

TITLE: DESTRUCTIBLE SURFACTANT-BASED VESICLES

FOR CONTROLLED DELIVERY.

GOLICHT T G [Reprint author]; JAEGER D A

DEPARTMENT CHEMISTRY, UNIVERSITY WYOMING, LARAMIE, WYO

82071, USA

JOURNAL OF THE AMERICAN OIL CHEMISTS' SOCIETY, (1985) VOL.

62, NO. 4, PP. 612.

MEETING INFO: 16TH ANNUAL AOCs (AMERICAN OIL CHEMISTS' SOCIETY) MEETING, PHILADELPHIA, PA., USA, MAY 5-9, 1985. J

AM OIL CHEM SOC.

CODEN: JAOCAT7. ISSN: 0003-021X.  
DOCUMENT TYPE: Conference; (Meeting)  
FILE SEGMENT: BR

LANGUAGE: ENGLISH  
TITLE: DESTRUCTIBLE SURFACTANT-BASED VESICLES FOR CONTROLLED DELIVERY.

DOCUMENT NUMBER: 1984:412581 HCAPUS Full-text

Design of microemulsions based on "deconstructible" surfactants for use in organic synthesis

Martin, Craig A.; Golich, Timothy G.; Jaeger, David A.

Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA

Journal of Colloid and Interface Science (1984), 99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

14 ANSWER 15 OF 15 HCAPUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:412581 HCAPUS Full-text

DOCUMENT NUMBER: 1984:412581 HCAPUS Full-text

Design of microemulsions based on "deconstructible" surfactants for use in organic synthesis

Martin, Craig A.; Golich, Timothy G.; Jaeger, David A.

Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA

Journal of Colloid and Interface Science (1984),

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

DOCUMENT TYPE: English  
LANGUAGE: English  
TITLE: microemulsion deconstructible surfactant org synthesis

AUTHOR(S): CORPORATE SOURCE: SOURCE:

99(2), 561-7

CODEN: JCISAS; ISSN: 0021-9797

PRIORITY INFORMATION:		US 2005-705612P 20050804 (60)		
ACCESSION NUMBER:		US 2005-71783P 20051202 (60)		
TITLE:		US 2006-793370P 20060303 (60)		
INVENTOR(S):		US 2006-792276P 20060414 (60)		
NUMBER OF CLAIMS:		Utility		
EXEMPLARY CLAIM:				
NUMBER OF DRAWINGS:				
LINE COUNT:		15181		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				
FILE SEGMENT:		FISH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US		
LEGAL REPRESENTATIVE:		APPLICATION		
DOCUMENT TYPE:		FISH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US		
EXEMPLARY CLAIM:		INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US		
NUMBER OF DRAWINGS:		2 Drawing Page(s)		
LINE COUNT:		15181		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				
Provided herein are novel sirtuin-modulating compounds and methods of use thereof. The sirtuin-modulating compounds may be used for increasing the lifespan of a cell, and treating and/or preventing a wide variety of diseases and disorders including, for example, diseases or disorders related to aging or stress, diabetes, obesity, neurodegenerative diseases, cardiovascular disease, blood clotting disorder, inflammation, cancer, and/or flushing as well as diseases or disorders that would benefit from increased mitochondrial activity. Also provided are compositions comprising a sirtuin-modulating compound in combination with another therapeutic agent.				
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				
19 ANSWER 2 OF 10 USPATFULL on STN				
ACCESSION NUMBER: 2007-43165 USPATFULL Full-text				
TITLE: Sirtuin modulating compounds				
INVENTOR(S): Nunes, Joseph J., Andover, MA, UNITED STATES				
Milne, Jill, Brookline, MA, UNITED STATES				
Bemis, Jean, Arlington, MA, UNITED STATES				
Xie, Roger, Southborough, MA, UNITED STATES				
Vu, Chi B., Arlington, MA, UNITED STATES				
Ng, Pui Yee, Boston, MA, UNITED STATES				
Disch, Jeremy S., Natick, MA, UNITED STATES				
Sirtris Pharmaceuticals, Inc., Cambridge, MA, UNITED STATES (U.S. corporation)				
PATENT ASSIGNEE(S):				
PATENT INFORMATION:				
APPLICATION INFO.:				
		NUMBER	KIND	DATE
		US 2007037865	A1	20070215
		US 2006-499920	A1	20060804 (11)
		NUMBER	DATE	
PRIORITY INFORMATION:				
US 2005-705612P 20050804 (60)				
US 2005-71783P 20051202 (60)				
US 2006-793370P 20060303 (60)				
US 2006-792276P 20060414 (60)				
DOCUMENT TYPE:				
FILE SEGMENT:		APPLICATION		
LEGAL REPRESENTATIVE:		FISH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US		
NUMBER OF CLAIMS:		66		
EXEMPLARY CLAIM:		1		
NUMBER OF DRAWINGS:		2 Drawing Page(s)		
LINE COUNT:		15878		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				

PRIORITY INFORMATION: US 2005-705612P 20050804 (60)  
FILE SEGMENT: US 2005-71783P 20051202 (60)  
LEGAL REPRESENTATIVE: US 2005-719370P 20060303 (60)  
NUMBER OF CLAIMS: US 2006-792276P 20060414 (60)  
EXEMPLARY CLAIM: Utility  
NUMBER OF DRAWINGS: 45  
NUMBER OF DRAWINGS: 1  
LINE COUNT: 2 Drawing Page(s)  
15181  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB  
Provided herein are novel sirtuin-modulating compounds and methods of use thereof. The sirtuin-modulating compounds may be used for increasing the lifespan of a cell, and treating and/or preventing a wide variety of diseases and disorders including, for example, diseases or disorders related to aging or stress, diabetes, obesity, neurodegenerative diseases, cardiovascular disease, blood clotting disorders, inflammation, cancer, and/or flushing as well as diseases or disorders that would benefit from increased mitochondrial activity. Also provided are compositions comprising a sirtuin-modulating compound in combination with another therapeutic agent.

Provided herein are novel sirtuin-modulating compounds and methods of use thereof. The sirtuin-modulating compounds may be used for increasing the lifespan of a cell, and treating and/or preventing a wide variety of diseases and disorders including, for example, diseases or disorders related to aging or stress, diabetes, obesity, neurodegenerative diseases, cardiovascular disease, blood clotting disorders, inflammation, cancer, and/or flushing as well as diseases or disorders that would benefit from increased mitochondrial activity. Also provided are compositions comprising a sirtuin-modulating compound in combination with another therapeutic agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

1.9 ANSWER 3 OF 10 USPATFULL on STN  
ACCESSION NUMBER: 2007-43127 USPATFULL [Full-text](#)  
TITLE: Sirtuin modulating compounds  
INVENTOR(S): Nunes, Joseph J., Andover, MA, UNITED STATES  
Mine, Jill, Brookline, MA, UNITED STATES  
Beams, Jean, Arlington, MA, UNITED STATES  
Xie, Rong, Southborough, MA, UNITED STATES  
Vu, Chi B., Arlington, MA, UNITED STATES  
Ng, Pui Yee, Boston, MA, UNITED STATES  
Disch, Jeremy S., Matric, MA, UNITED STATES  
Sirtis Pharmaceuticals, Inc., Cambridge, MA, UNITED STATES (U.S. corporation)

PATENT INFORMATION:	NUMBER	KIND	DATE
APPLICATION INFO.:	US 2007017827	A1	20070215 (60)
	US 2006-499339	A1	20060804 (11)

PRIORITY INFORMATION:

NUMBER	DATE
US 2005-705612P	20050804 (60)
US 2005-741783P	20051202 (60)
US 2006-779370P	20060303 (60)
US 2006-792276P	20060414 (60)

DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: FITSH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US

EXEMPLARY CLAIM:  
NUMBER OF CLAIMS: 45  
NUMBER OF DRAWINGS: 1  
LINE COUNT: 15360

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB provided herein are novel sirtuin-modulating compounds and methods of use thereof. The sirtuin-modulating compounds may be used for increasing the lifespan of a cell, and treating and/or preventing a wide variety of diseases and disorders including, for example, diseases or disorders related to aging or stress, diabetes, obesity, neurodegenerative diseases, cardiovascular disease, blood clotting disorders, inflammation, cancer, and/or flushing as well as diseases or disorders that would benefit from increased mitochondrial activity. Also provided are compositions comprising a sirtuin-modulating compound in combination with another therapeutic agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.



LEGAL REPRESENTATIVE: EDWARDS & ANGELL, LLP, P.O. BOX 55874, BOSTON, MA, 02205, US  
NUMBER OF CLAIMS: 70  
NUMBER OF DRAWINGS: 13 Drawing Page(s)  
LINE COUNT: 1376

CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB The present invention provides methods for enhancing chemical reactions of molecules, e.g., biomolecules, with destructive surfactants. The chemical reactions may involve and/or be associate with analysis, e.g., solubilizing, separating, purifying and/or characterizing the molecules. In one aspect, the anionic surfactants of the present invention may be selectively broken up at relatively low pH. The resulting breakdown products of the surfactants may be removed from the molecule/sample with relative ease. The invention has applicability in a variety of analytical techniques.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

19 ANSWER 7 OF 10 USPATFULL on STN  
ACCESSION NUMBER: 2005293509 USPATFULL Full-text

TITLE: Propenoyl hydrazides  
INVENTOR(S): Powers, James C., Atlanta, GA, UNITED STATES  
Asgian, Julianne, Fullerton, CA, UNITED STATES  
Eckel, Ozlem Dogan, Columbus, OH, UNITED STATES  
Gotz, Marion Gabriele, Hirschau, GERMANY, FEDERAL  
REPUBLIC OF  
REPLACES: James, Karen Ellis, Cumming, GA, UNITED STATES  
Li, Zhao Zhao, Norcross, GA, UNITED STATES  
Rukamp, Brian, Appleton, WI, UNITED STATES

PATENT INFORMATION:  
APPLICATION INFO.: NUMBER KIND DATE  
-----  
US 2005256058 A1 20051117  
US 2005-6-2017 A1 20050218 (11)

NUMBER

DATE

US 2004-5-45354P 20040218 (60)

PRIORITY INFORMATION:

DOCUMENT TYPE: US

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: THOMAS, KAYDEN, HORSTMEYER & RISLEY, LLP, 100 GALLERIA  
PARKWAY, NW, STE 1750, ATLANTA, GA, 30339-5948, US

NUMBER OF CLAIMS: 20

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 4334

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present disclosure provides compositions for inhibiting proteases, methods for synthesizing the compositions, and methods of using the disclosed protease inhibitors. Aspects of the disclosure include a peptidyl propanoyl hydrazide compositions that inhibit proteases, for example cysteine proteases, either *in vivo* or *in vitro*.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

19 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1  
ACCESSION NUMBER: 2004:201567 HCAPLUS Full-text  
DOCUMENT NUMBER: 141:345881

TITLE: Acid-labile surfactant improves in-sodium dodecyl sulfate polyacrylamide gel protein digestion for matrix-assisted laser desorption/ionization mass spectrometric peptide mapping  
NUMBER OF DRAWINGS: 1  
INVENTOR(S): Nomura, Eiko; Katsuma, Kazuhiko; Ueda, Tomoko; Toriyama, Michinori; Mori, Tatsuya; Inagaki, Naoyuki  
CORPORATE SOURCE: Division of Signal Transduction, Graduate School of Biological Sciences, Nara Institute of Science and Technology, Ikoma, 630-0192, Japan  
PUBLISHER: Journal of Mass Spectrometry (2004), 39(2), 202-207  
DOCUMENT TYPE: CODEN: JMSPFJ; ISSN: 1076-5174  
LANGUAGE: English  
AB Mass spectrometry (MS) together with genome database searches serves as a powerful tool for the identification of proteins. In proteome anal., mixts. of cellular proteins are usually separated by sodium dodecyl sulfate (SDS) polyacrylamide gel-based two-dimensional gel electrophoresis (2-DE) or one-dimensional gel electrophoresis (1-DE), and in-gel digested by a specific protease. In-gel protein digestion is one of the critical steps for sensitive protein identification by these procedures. Efficient protein digestion is required for obtaining peptide peaks necessary for protein identification by MS. This paper reports a remarkable improvement of protein digestion in SDS polyacrylamide gels using an acid-labile surfactant, sodium 3-[{2-(methyl)-2-undecyl}-1,3-dioxolan-4-yl]methoxy-1-propenesulfonate (ALS). Pretreatment of gel pieces containing protein spots separated by 2-DE with a small amount of ALS prior to trypsin digestion led to increases in the digested peptides eluted from the gels. Consistently, treatment of gel pieces containing silver-stained standard proteins and those separated from tissue exts. resulted in the detection of increased nos. of peptide peaks in spectra obtained by matrix-assisted laser desorption/ionization time of flight mass spectrometry (MALDI-TOFMS). Hence the present protocol with ALS provides a useful strategy for sensitive protein identification by MS.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
DOCUMENT NUMBER: 2003511052 MEDLINE  
ACCESSION NUMBER: 2003511052 MEDLINE Full-text  
TITLE: Enzyme-friendly, mass spectrometry-compatible surfactant for in-solution enzymatic digestion of proteins.  
AUTHOR: Yu Ying-Qing; Gilar Martin; Lee Peter J; Bouvier Edouard S P; Gebler John C  
CORPORATE SOURCE: Life Sciences Research and Development, Waters Corporation, 34 Maple Street, Milford, Massachusetts 01757, USA.  
SOURCE: Analytical Chemistry, (2003 Nov 1) Vol. 75, No. 21, pp. 6023-8.

PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200406  
ENTRY DATE: Entered STN: 1 Nov 2003  
Last Updated on STN: 9 Jun 2004  
Entered Medline: 8 Jun 2004

AB Improved in-solution tryptic digestion of proteins in terms of speed and peptide coverage was achieved with the aid of a novel acid-labile anionic surfactant (ALS). Unlike SDS, ALS solubilizes proteins without inhibiting

trypsin or other common endopeptidases activity. Trypsin activity was evaluated in the presence of various denaturants; little or no decrease in proteolytic activity was observed in 0.1-1% ALS solutions (w/v). Sample preparation prior to mass spectrometry and liquid chromatography analysis consists of sample acidification. ALS degrades rapidly at low-pH conditions, which eliminates surfactant-caused interference with analysis. Described methodology combines the advantages of protein solubilization, rapid digestion, high peptide coverages, and easy sample preparation for mass spectrometry and liquid chromatography analyses.

19 ANSWER 10 OF 10 MEDLINE on STN

ACCESSION NUMBER: 2002378830 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 12124938

TITLE: Identification of proteins from two-dimensional

polyacrylamide gels using a novel acid-labile

surfactant.

AUTHOR: Ross Andrew R; Lee Peter J; Smith Duncan L; Langridge

James I; Whettton Anthony D; Gaskell Simon J

CORPORATE SOURCE: National Research Council of Canada, Plant Biotechnology

Institute, Saskatoon SK, Canada.. andrew.r.ross@nrc.ca

SOURCE: Proteomics, (2002 Jul) Vol. 2, No. 7, pp. 928-36.

JOURNAL CODE: 101082707. ISSN: 1615-9853.

PUB. COUNTRY: Germany; Germany; Federal Republic of

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

(RESEARCH SUPPORT, NON-U.S. GOVT)

LANGUAGE: English

Primary Journals

ENTRY MONTH: 200303

ENTRY DATE: Entered STN: 19 Jul 2002

Last Updated on STN: 19 Mar 2003

Entered Medline: 18 Mar 2003

AB Protein identification by peptide mass mapping usually involves digestion of

gel-separated proteins with trypsin, followed by mass measurement of the

resulting peptides by matrix-assisted laser desorption/ionization mass

spectrometry (MALDI-MS). Positive identification requires measurement of

enough peptide masses to obtain a definitive match with sequence information

recorded in protein or DNA sequence databases. However, competitive binding

and ionization of residual surfactant introduced during polyacrylamide gel

electrophoresis (PAGE) can inhibit solid-phase extraction and MS analysis of

tryptic peptides. We have evaluated a novel, acid-labile surfactant (ALS) as

an alternative to sodium dodecylsulfate (SDS) for two-dimensional (2-D) PAGE

separation and MALDI-MS mapping of proteins. ALS was substituted for SDS at

the same concentration in buffers and gels used for 2-D PAGE. Manual and

automated procedures for spot cutting and in-gel digestion were used to

process Coomassie stained proteins for MS analysis. Results indicate that

substituting ALS for SDS during PAGE can significantly increase the number of

peptides detected by MALDI-MS, especially for proteins of relatively low

abundance. This effect is attributed to decomposition of ALS under acidic

conditions during gel staining, destaining, peptide extraction and MS sample

preparation. Automated excision and digestion procedures reduce contamination

by keratin and other impurities, further enhancing MS identification of gel

separated proteins.

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(FILE 'HOME' ENTERED AT 07:00:19 ON 24 APR 2007)

FILE 'HCAPLUS, USPATFULL, BIOSIS, MEDLINE' ENTERED AT 07:00:31 ON 24 APR 2007

11	15 SEA DESTRUCTIBLE SURFACTANT
12	0 SEA LI AND PROPANESULFONATE
13	0 SEA LI AND ALS
14	15 DUP REM 11 (0 DUPLICATES REMOVED)
15	2351 SEA 15 AND IBIB KWIC
16	56514 SEA 15 AND TRYPSIN OR TRYPTIC
17	1038 SEA 15 AND (TRYPSIN OR TRYPTIC)
18	12 SEA 17 AND PROPANESULFONATE
19	10 DUP REM 18 (2 DUPLICATES REMOVED)
	D 19 1-10 IBIB ABS

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 24 Apr 2007 VOL 146 ISS 18

FILE LAST UPDATED: 23 Apr 2007 (20070423/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details. This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE USPATFULL  
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 19 Apr 2007 (20070419/ED)  
FILE LAST UPDATED: 19 Apr 2007 (20070419/ED)  
HIGHEST GRANTED PATENT NUMBER: US7207069

HIGHEST APPLICATION PUBLICATION NUMBER: US2007089214  
CA INDEXING IS CURRENT THROUGH 19 Apr 2007 (20070419/UFCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 19 Apr 2007 (20070419/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2006  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2006

FILE BIOSIS  
FILE COVERS 1969 TO DATE. CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 18 April 2007 (20070418/ED)

FILE MEDLINE

FILE LAST UPDATED: 21 Apr 2007 (20070421/UP). FILE COVERS 1950 TO DATE.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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60.17	60.38	
	SINCE FILE ENTRY	TOTAL SESSION
-3.90	-3.90	

FILE 'REGISTRY' ENTERED AT 12:08:58 ON 04 DEC 2006  
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STRUCTURE FILE UPDATES: 3 DEC 2006 HIGHEST RN 914612-67-2  
DICTIONARY FILE UPDATES: 3 DEC 2006 HIGHEST RN 914612-67-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

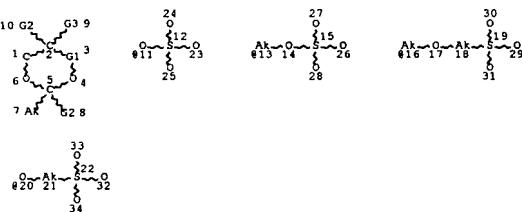
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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experimental property data in the original document. For information  
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<http://www.cas.org/ONLINE/UG/regprops.html>

L1 STR



REP G1=(0-2) CH2

VAR G2+H/CH3

VAR G3=11/13/16/20

NODE ATTRIBUTES:

CONNECT IS X2 RC AT 1

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

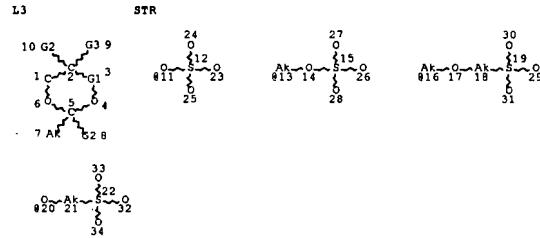
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L2 ( 113)SEA FILE=REGISTRY SSS FUL L1

1



REP G1=(0-2) CH2

VAR G2+H/CH3

VAR G3=11/13/16/20

NODE ATTRIBUTES:

CONNECT IS X2 RC AT 1

DEFAULT MLEVEL IS ATOM

GGCAT IS LOC AT 13

GGCAT IS LOC AT 16

GGCAT IS LOC AT 18

GGCAT IS LOC AT 21

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L4 113 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

100.0% PROCESSED 113 ITERATIONS

113 ANSWERS

SEARCH TIME: 00.00.01

FILE 'HCAPLUS' ENTERED AT 12:08:58 ON 04 DEC 2006

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FILE COVERS 1907 - 4 Dec 2006 VOL 145 ISS 24

FILE LAST UPDATED: 3 Dec 2006 (20061203/ED)

2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006031725	A2	20060323	WO 2005-US32406	20050913
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DS, EC, EE, EG, ES, FI, GB, GD, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KE, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PK, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, EH, EW				
RU: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MB, NA, SD, SL, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 2006122146	A1	20060608	US 2005-225425	20050913
PRIORITY APPLN. INFO.:			US 2004-609738P	P 20040914
			US 2004-610035P	P 20040915
			US 2005-666230P	P 20050329

OTHER SOURCE(S): MARPAT 144:312289  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH<sub>3</sub>, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 2-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyl-dialkylsilyl, t-butylidiphenylsilyl, TIPDS, THF, MOM, or MEB are prepared and used in the condensation to 2-deoxy-2-fluoro-D-ribonofuranosyl pyrimidines and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribonofuranosyl pyrimidines and purine nucleoside analogs II and III, wherein X is a halogen; Y is N or CH; Z is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R<sup>1</sup> is alkyl, vinyl, ethynyl; R<sup>2</sup> and R<sup>3</sup> can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or 2',3'-O-benzylidene, or 2',3'-cyclic carbonate; R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> are independently H, halogen, hydroxyl, ether, thiol, (un)substituted amine, (un)substituted amido, alkyl, halogenated alkyl, alkenyl, halogenated alkynyl, alkyne, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared in 88 % yield via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

IT 879551-03-0P  
RL: IMP (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribonofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

IT 879551-05-0P  
RL: IMP (Industrial manufacture); SPN (Synthetic preparation); PREP

L5 ANSWER 2 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 23 Mar 2006  
ACCESSION NUMBER: 2006:269477 HCAPLUS Full-text  
DOCUMENT NUMBER: 144:312289  
TITLE: Preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribonofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides as potential antiviral agents  
INVENTOR(S): Chun, Byoung-Kwon; Wang, Peiyuan  
PATENT ASSIGNEE(S): Pharmasset, Inc., USA  
SOURCE: PCT Int. Appl., '74 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1

3

4

(Preparation)  
(preparation of alkyl-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides)

L5 ANSWER 3 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 03 Feb 2006  
ACCESSION NUMBER: 2006:99537 HCAPLUS Full-text

DOCUMENT NUMBER: 144:327329  
TITLE: Analysis of Membrane Proteins from Human Chronic Myelogenous Leukemia Cells: Comparison of Extraction Methods for Multidimensional LC-MS/MS  
AUTHOR(S): Ruth, Mariah C.; Old, William M.; Emrick, Michelle A.; Meyer-Arendt, Karen; Aveline-Wolf, Lauren D.; Pierce, Kevin G.; Mendoza, Alex M.; Sevinsky, Joel R.; Hamady, Micah; Knight, Robin D.; Resing, Katherlyn A.; Abn, Natalie G.

CORPORATE SOURCE: Yale University School of Medicine, New Haven, CT, 06510, USA

SOURCE: Journal of Proteome Research (2006), 5(3), 709-719  
CODEN: JPROBS; ISSN: 1535-3893

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An important strategy for "shotgun proteomics" profiling involves solution proteolysis of proteins, followed by peptide separation using multidimensional liquid chromatog. and automated sequencing by mass spectrometry (LC-MS/MS). Several protocols for extracting and handling membrane proteins for shotgun proteomics expts. have been reported, but few direct comparisons of different protocols have been reported. The authors compare four methods for preparing membrane proteins from human cells, using acid labile surfactants (ALS), urea, and mixed organic-aqueous solvents. These methods were compared with respect to their efficiency of protein solubilization and proteolysis, peptide and protein recovery, membrane protein enrichment, and peptide coverage of transmembrane proteins. Overall, approx 50-60% of proteins recovered were membrane-associated, identified from Gene Ontol. annotations and transmembrane prediction software. Samples extracted with ALS, extracted with urea followed by dilution, or extracted with urea followed by desalting yielded comparable peptide diversity and sequence coverage of transmembrane proteins. In contrast, suboptimal proteolysis was observed with organic solvent. Urea extraction followed by desalting may be a particularly useful approach, as it is less costly than ALS and yields satisfactory protein denaturation and proteolysis under conditions that minimize reactivity with urea-derived cyanate. Spectral counting was used to compare datasets of proteins from membrane samples with those of soluble proteins from K562 cells, and to estimate fold differences in protein abundances. Proteins most highly abundant in the membrane samples showed enrichment of integral membrane protein identifications, consistent with their isolation by differential centrifugation.

IT 308818-13-5, RapiGest

RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(extraction with; comparison of extraction methods for multidimensional LC-MS/MS anal. of membrane proteins from human chronic myelogenous leukemia cells)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

5

SOURCE: Regional Laboratory, Jagiellonian University, Krakow, 30-060, Pol.  
Rapid Communications in Mass Spectrometry (2004), 18(7), 822-824  
CODEN: RCMSEF; ISSN: 0951-4198

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB RapiGest can serve as a useful and complementary tool for proteomic strategies, in a limited way, preferentially for digestion of proteins in solution. Acid-labile surfactant (ALS) is a long-chain derivative of 1,3-dioxolane sodium propoxy sulfate which degrades at low pH.

IT 308818-13-5

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(acid-labile surfactant assists insoln. digestion of proteins resistant to enzymatic attack)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 07 Apr 2004

ACCESSION NUMBER: 2004:284338 HCAPLUS Full-text

DOCUMENT NUMBER: 141:101782

TITLE: A complete peptide mapping of membrane proteins: a novel surfactant aiding the enzymatic digestion of bacteriorhodopsin

AUTHOR(S): Yu, Ying-Qing; Giler, Martin; Gabler, John C.

CORPORATE SOURCE: Millford, MA, 01757, USA

SOURCE: Rapid Communications in Mass Spectrometry (2004), 18(6), 711-715

CODEN: RCMSEF; ISSN: 0951-4198

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Here we report a simplified method for tryptic digestion of membrane protein BR using RapiGest<sup>TM</sup> SF, an acid-labile surfactant (ALS). This surfactant is known to facilitate rapid in-solution enzymic digestion of protein substrates without inhibiting endopeptidase activity. We demonstrate a complete peptide mapping of BR utilizing ALS solns. for membrane protein digestion. A little as 0.7  $\mu$ g of sample was used for the LC/MS anal. The sample preparation is fast, simple, and efficient for both LC/MS and MALDI-TOF-MS analyses.

IT 308818-13-5

RL: BUU (Biological study, unclassified); BIOL (Biological study)

(surfactant aiding enzymic digestion of bacteriorhodopsin for peptide mapping)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 12 Mar 2004

ACCESSION NUMBER: 2004:201567 HCAPLUS Full-text

DOCUMENT NUMBER: 141:345881

TITLE: Acid-labile surfactant improves in-sodium dodecyl sulfate polyacrylamide gel protein digestion for matrix-assisted laser desorption/ionization mass spectrometric peptide mapping

AUTHOR(S): Nomura, Eiko; Katsuta, Kazuhiro; Ueda, Tomoko;

Toriyama, Michinori; Mori, Tatsuya; Inagaki,

L5 ANSWER 4 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 09 Dec 2005  
ACCESSION NUMBER: 2005:1291827 HCAPLUS Full-text  
DOCUMENT NUMBER: 144:33889  
TITLE: A method for the rapid analysis of polypeptides  
INVENTOR(S): Alam, Mahammad Asif; Bowden, Donald Keith; Boysen, Reinhard Ingemar; Hearn, Milton Thomas William  
PATENT ASSIGNEE(S): Monash University, Australia  
SOURCE: PCT Int. Appl., 163 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005116607	A1	20051205	WO 2005-AU755	20050527
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, MW, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	RW: BW, GH, GM, KZ, LS, MW, NA, SD, SL, SE, TZ, UG, ZM, ZW, AM, AZ, BI, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG	AU 2004-902922	A 20040527	

PRIORITY APPLN. INFO.: AU 2004-903001 A 20040603

AB The invention provides improved sample preparation techniques as well as improved methods of anal. of samples. The techniques include a method of preparing a sample of MALDI-TOF anal. comprising applying a material having a liquid component to a carrier, removing at least a portion of the liquid component, and applying a MALDI matrix over the material to be analyzed. In other embodiments, the sample preparation techniques include digestion of peptides prior to anal. by MALDI-TOF, which may be done in the presence of a surfactant, and sandwiching a sample for anal. between layers of MALDI matrix on a sample carrier.

IT 308818-13-5

RL: NUU (Other use, unclassified); USES (Uses)

(method for rapid anal. of polypeptides)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 19 Apr 2004

ACCESSION NUMBER: 2004:316306 HCAPLUS Full-text

DOCUMENT NUMBER: 141:221087

TITLE: Acid-labile surfactant assists insolusion digestion of proteins resistant to enzymatic attack

AUTHOR(S): Suder, Piotr; Bierczynska, Anna; Koenig, Simone; Silberzberg, Jerzy

CORPORATE SOURCE: Neurobiochemistry Group, Faculty of Chemistry and

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CORPORATE SOURCE: Naoyuki  
Division of Signal Transduction, Graduate School of Biological Sciences, Nara Institute of Science and Technology, Ikoma, 630-0192, Japan  
Journal of Mass Spectrometry (2004), 39(2), 202-207

SOURCE: CODEN: JMSPEJ; ISSN: 1076-5174

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mass spectrometry (MS) together with genome database searches serves as a powerful tool for the identification of proteins. In proteome anal., mixes. of cellular proteins are usually separated by sodium dodecyl sulfate (SDS) polyacrylamide gel-based two-dimensional gel electrophoresis (2-DE) or one-dimensional gel electrophoresis (1-DE), and in-gel digested by a specific protease. In-gel protein digestion is one of the critical steps for sensitive protein identification by these procedures. Efficient protein digestion is required for obtaining peptide peaks necessary for protein identification by MS. This paper reports a remarkable improvement of protein digestion in SDS polyacrylamide gels using an acid-labile surfactant, sodium 3-[2-methyl-2-undecyl-1,3-dioxolan-4-yl]methoxy-1-propanesulfonate (ALS). Pretreatment of gel pieces containing protein spots separated by 2-DE with a small amount of ALS prior to trypsin digestion led to increases in the digested peptides eluted from the gels. Consistently, treatment of gel pieces containing silver-stained standard proteins and those separated from tissue exts. resulted in the detection of increased nos. of peptide peaks in spectra obtained by matrix-assisted laser desorption/ionization time of flight mass spectrometry (MALDI-TOFMS). Hence the present protocol with ALS provides a useful strategy for sensitive protein identification by MS.

IT 308818-13-5

RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(acid-labile surfactant improves in-sodium dodecyl sulfate polyacrylamide gel protein digestion for matrix-assisted laser desorption/ionization mass spectrometric peptide mapping)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Dec 2003

ACCESSION NUMBER: 2003:972310 HCAPLUS Full-text

DOCUMENT NUMBER: 140:17749

TITLE: Destructive surfactants and use in small molecule analysis

INVENTOR(S): Mallet, Claude; Russel, Reb J., II; Yardley, Kurt

PATENT ASSIGNEE(S): Waters Investments Limited, USA

SOURCE: PCT Int. Appl., 45 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-US16819	20030530
WO 2003102536	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	RW: BW, GH, GM, KZ, LS, MW, NA, SD, SL, SE, TZ, UG, ZM, ZW, AM, AZ, BI, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	AU 2003-902922	A 20040527	

PRIORITY APPLN. INFO.: AU 2004-903001 A 20040603

REFERENCE COUNT: 1

RE FORMAT

L5 ANSWER 7 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 12 Mar 2004

ACCESSION NUMBER: 2004:201567 HCAPLUS Full-text

DOCUMENT NUMBER: 141:345881

TITLE: Acid-labile surfactant improves in-sodium dodecyl sulfate polyacrylamide gel protein digestion for matrix-assisted laser desorption/ionization mass spectrometric peptide mapping

AUTHOR(S): Nomura, Eiko; Katsuta, Kazuhiro; Ueda, Tomoko;

Toriyama, Michinori; Mori, Tatsuya; Inagaki,

CORPORATE SOURCE: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-US16819	20030530
WO 2003102536	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	RW: BW, GH, GM, KZ, LS, MW, NA, SD, SL, SE, TZ, UG, ZM, ZW, AM, AZ, BI, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	AU 2004-902922	A 20040527	

PRIORITY APPLN. INFO.: AU 2004-903001 A 20040603

REFERENCE COUNT: 1

RE FORMAT

L5 ANSWER 8 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Dec 2003

ACCESSION NUMBER: 2003:972310 HCAPLUS Full-text

DOCUMENT NUMBER: 140:17749

TITLE: Destructive surfactants and use in small molecule analysis

INVENTOR(S): Mallet, Claude; Russel, Reb J., II; Yardley, Kurt

PATENT ASSIGNEE(S): Waters Investments Limited, USA

SOURCE: PCT Int. Appl., 45 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-US16819	20030530
WO 2003102536	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	RW: BW, GH, GM, KZ, LS, MW, NA, SD, SL, SE, TZ, UG, ZM, ZW, AM, AZ, BI, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	AU 2004-902922	A 20040527	

PRIORITY APPLN. INFO.: AU 2004-903001 A 20040603

REFERENCE COUNT: 1

RE FORMAT

L5 ANSWER 9 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 12 Mar 2004

ACCESSION NUMBER: 2004:201567 HCAPLUS Full-text

DOCUMENT NUMBER: 141:345881

TITLE: Acid-labile surfactant improves in-sodium dodecyl sulfate polyacrylamide gel protein digestion for matrix-assisted laser desorption/ionization mass spectrometric peptide mapping

AUTHOR(S): Nomura, Eiko; Katsuta, Kazuhiro; Ueda, Tomoko;

Toriyama, Michinori; Mori, Tatsuya; Inagaki,

CORPORATE SOURCE: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-US16819	20030530
WO 2003102536	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	RW: BW, GH, GM, KZ, LS, MW, NA, SD, SL, SE, TZ, UG, ZM, ZW, AM, AZ, BI, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW	AU 2004-902922	A 20040527	

PRIORITY APPLN. INFO.: AU 2004-903001 A 20040603

REFERENCE COUNT: 1

RE FORMAT

L5 ANSWER 10 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Dec 2003

ACCESSION NUMBER: 2003:972310 HCAPLUS Full-text

DOCUMENT NUMBER: 140:17749

TITLE: Destructive surfactants and use in small molecule analysis

INVENTOR(S): Mallet, Claude; Russel, Reb J., II; Yardley, Kurt

PATENT ASSIGNEE(S): Waters Investments Limited, USA

SOURCE: PCT Int. Appl., 45 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, U2, VC, VN, YU, EA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, TZ, UG, ZM, ZW, AM, AZ,  
BY, KG, KE, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR,  
NE, SN, TD, TG  
AU 2003234681 . A1 20031219 AU 2003-234681 20030530  
US 2006094000 A1 20060504 US 2005-516419 20050829  
PRIORITY APPLN. INFO.: US 2002-385018P P 20020531  
WO 2003-US16819 W 20030530

## OTHER SOURCE(S): MARPAT 140:17749

AB The anionic surfactants have a dioxolane or dioxane functional group that enable degradation of the surfactant under acidic conditions. Using the anionic surfactants in a variety of anal. applications relates to samples containing small mols.

IT 308818-10-39 308818-11-39

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses) (surfactant; anionic surfactants used in small mol. detection)

IT 308818-13-59

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (surfactant; anionic surfactants used in small mol. detection)

LS ANSWER 9 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Dec 2003

ACCESSION NUMBER: 2003:972250 HCAPLUS Full-text

DOCUMENT NUMBER: 140:25191

TITLE: Destabilizing surfactants and uses thereof

INVENTOR(S): Bouvier, Edouard S. P.; Copton, Bruce John; Gebler, John C.; Gilar, Martin; Lee, Ying-Qing; Lee, Peter Jeng Jong; Brown, Elizabeth K.

PATENT ASSIGNEE(S): Waters Investments Limited, USA

SOURCE: PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102225	A1	20031211	WO 2003-US16820	20030530
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, U2, VC, VN, YU, EA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KE, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
AU 2003234682	A1	20031219	AU 2003-234682	20030530

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AB Protein identification by peptide mass mapping usually involves digestion of gel-separated proteins with trypsin, followed by mass measurement of the resulting peptides by matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS). Pos. identification requires measurement of enough peptide masses to obtain a definitive match with sequence information recorded in protein or DNA sequence databases. However, competitive binding and ionization of residual surfactant introduced during PAGE (PAGE) can inhibit solid-phase extraction and MS anal. of tryptic peptides. We have evaluated a novel, acid-labile surfactant (ALS) as an alternative to sodium dodecylsulfate (SDS) for two-dimensional (2-D) PAGE separation and MALDI-MS mapping of proteins. ALS was substituted for SDS at the same concentration in buffers and gels used for 2-D PAGE. Manual and automated procedures for spot cutting and in-gel digestion were used to process Coomassie stained proteins for MS anal. Results indicate that substituting ALS for SDS during PAGE can significantly increase the number of peptides detected by MALDI-MS, especially for proteins of relatively low abundance. This effect is attributed to decomposition of ALS under acidic conditions during gel staining, destaining, peptide extraction and MS sample preparation. Automated excision and digestion procedures reduce contamination by keratin and other impurities, further enhancing MS identification of gel separated proteins.

IT 308818-13-59

RL: NNU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(identification of proteins from two-dimensional polyacrylamide gels using novel acid-labile surfactant)

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 23 Jan 2002

ACCESSION NUMBER: 2002:59114 HCAPLUS Full-text

DOCUMENT NUMBER: 136:249430

TITLE: Winsor-type microemulsions stabilized by mixtures of surfactants

AUTHOR(S): Zielonka, Barbara; Sokolowski, Adam

CORPORATE SOURCE: Wroclaw University of Technology, Wroclaw, Pol.

SOURCE: World Surfactants Congress, 5th, Firenze, Italy, May 29-June 2, 2000 (2000), 852-860. Comite European des Agents de Surface et leurs Intermediaires Organiques: Brussels, Belg.

CODEN: 69BYWU

DOCUMENT TYPE: Conference; (computer optical disk)

LANGUAGE: English

AB We have undertaken investigations upon the behavior in Winsor microemulsion systems of surfactant mixts. Sodium n-alkyl sulfates, sulfonates, carboxylates, acetal-type surfactants and fluorinated amphiphiles-sodium carboxylate, fluorinated sugar-type derivative were used as addnl. surface-active agents, called "second surfactants". They were added to systems containing n-heptane, water, sodium diethylhexylsulfosuccinate (AOT) and NaCl in order to obtain transition from water-in-oil microemulsions (Winsor II) to oil-in-water ones (Winsor I). From interfacial tension measurements we determined the regions where Winsor I, Winsor II, and Winsor III occur and calculated the standard free energy of transition,  $\Delta G^\circ$ , from the Winsor I to the Winsor III system. Addnl., the  $\Delta G^\circ$  contributions derived from all structural parts of the second surfactant mol., i.e. CH<sub>2</sub>, CF<sub>2</sub>, head group, were estimated

IT 139088-69-0 139888-70-3 139088-72-5

186189-03-7 186189-04-8 186189-05-9

186189-06-0

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RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(Winsor-type microemulsions stabilized by mixts. of surfactants)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 26 Sep 2001

ACCESSION NUMBER: 2001:69311 HCAPLUS Full-text

DOCUMENT NUMBER: 136:202175

TITLE: Decomposition properties of sodium

3-[(2-alkyl-1,3-dioxolan-4-yl)methoxy]-1-

propanesulfonates

AUTHOR(S): Zhu, Hong-jun; Wang, Jin-tang; Xu, Feng

CORPORATE SOURCE: School of Science, Nanjing University of Chemical Technology, Nanjing, 210090, Peop. Rep. China

SOURCE: Jingxi Huagong (2001), 18(8), 443-444, 460

CODEN: JHUFJ; ISSN: 1003-5214

PUBLISHER: Jingxi Huagong Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxy]-1-propanesulfonates (alkyl = heptyl (NDMPS), undecyl (UDMPS)) in 0.1 mol/l HCl solution (25°) were measured by gas chromatog. The kinetics investigation showed that the decomposition reaction of these surfactants is pseudo-first-order. Their rate constant  $k$  and half-life  $t_{1/2}(h)$ : NDMPS 0.638, UDMPS 0.827, UDMPS 0.936.

IT 333952-53-7 333952-54-8 333952-55-9

RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxy]-1-propanesulfonates as anionic surfactants)

L5 ANSWER 16 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 12 Dec 2000

ACCESSION NUMBER: 2000:865356 HCAPLUS Full-text

DOCUMENT NUMBER: 134:29655

TITLE: Method for preparation of diglycerin from

diglycerin ketol or acetal derivatives

INVENTOR(S): Murata, Daiya; Imanaka, Takehiro; Nagumo, Hiroshi

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000344705	A2	20001212	JP 1999-157970	19990604

PRIORITY APPLN. INFO.: CASREACT 134:29655; MARPAT 134:29655

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yl methoxy)-1-propanesulfonate; sodium 3-[(undecyl-1,3-dioxolan-4-yl)methoxy]-1-propanesulfonate) with 1,3-dioxolane ring were prepared by three steps. (a) some of acetals (I) were prepared by reaction of aldehydes and tri- $\beta$ -orthoformate at 8-10° under the catalysis of ammonium nitrate (50% yield). (b) the cyclic glycerol acetals (II) were prepared by transacetalation of I with glycerol at 110° (80% yield), (c) then the intermediates II reacted with inner salts of 3-hydroxypropanesulfonic acid and sodium hydroxide at 60-65° for 8 h to give III (90% yield). The structure identification was performed using elementary anal., IR and  $^1$ H NMR.

IT 333952-53-7 333952-54-8 333952-55-9

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(degradable sulfonate surfactants; preparation of)

L5 ANSWER 18 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 24 Nov 2000

ACCESSION NUMBER: 2000:824508 HCAPLUS Full-text

DOCUMENT NUMBER: 134:2339

TITLE: Destructible surfactants and uses thereof

INVENTOR(S): Lee, Peter; Jong, Jong; Compton, Bruce J.

PATENT ASSIGNEE(S): Waters Investments Ltd., USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXX2D

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2000070334	A1	20001213	WO 2000-US13028	20000512

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KE, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MM, MX, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2000048435 A5 20001205 AU 2000-48435 20000512

EP 1181537 A1 20020227 EP 2000-930651 20000512

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1999-134113P P 19990514

WO 2000-US13028 W 20000512

OTHER SOURCE(S): MARPAT 134:2339

AB Destructible surfactants and methods of using same are provided. The invention includes anionic surfactants having a dioxolane or dioxane functional group which enables the surfactant to be broken down under acidic conditions. The invention also includes methods of making anionic surfactants and methods of using anionic surfactants in a variety of applications.

IT 138487-16-0P 308818-17-9

RL: NNU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(destructible surfactants and uses thereof)

IT 138487-16-0P 308818-10-2P 308818-11-3P  
308818-13-5P 308818-14-6P 308818-15-7P

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RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Properties); USES (Uses) (destructible surfactants and uses thereof)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 26 Apr 2000  
ACCESSION NUMBER: 2000:270652 HCAPLUS Full-text  
DOCUMENT NUMBER: 133:336886  
TITLE: Synthesis and surface properties of chemodegradable anionic surfactants: diastereomeric (2-n-alkyl-1,3-dioxan-5-yl) sulfates with monovalent counter-ions. [Erratum to document cited in CA132:196127]  
AUTHOR(S): Piatecki, Andrzej; Mayhew, Alexandra  
CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.  
SOURCE: Journal of Surfactants and Detergents (2000), 3(2), 237  
CODEN: JSDEFL; ISSN: 1097-3958  
PUBLISHER: ACS Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The captions for Figs. 2 and 3 were switched; the corrected figures and their corresponding captions are given.  
IT 186189-03-7P 186189-04-8P 186189-05-9P  
186189-06-0P 259738-90-4P 259738-91-5P  
259738-92-6P 259738-93-7P 259738-94-8P  
259738-95-9P 259738-96-0P 259738-97-1P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (synthesis and surface properties of chemodegradable diastereomeric (alkyldioxanyl) sulfate anionic surfactants with monovalent counter-ions) [Erratum]  
L5 ANSWER 20 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 23 Jan 2000  
ACCESSION NUMBER: 2000:51525 HCAPLUS Full-text  
DOCUMENT NUMBER: 132:196127  
TITLE: Synthesis and surface properties of chemodegradable anionic surfactants: diastereomeric (2-n-alkyl-1,3-dioxan-5-yl) sulfates with monovalent counter-ions  
AUTHOR(S): Piatecki, Andrzej; Mayhew, Alexandra  
CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.  
SOURCE: Journal of Surfactants and Detergents (2000), 3(1), 59-65  
CODEN: JSDEFL; ISSN: 1097-3958  
PUBLISHER: ACS Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Sodium, potassium and ammonium cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl) sulfates 6-8 (alkyl: n-C9H19, 6a-8a, and n-C11H23, 6b-8b) were synthesized in a reaction of aliphatic aldehydes 1a,b with glycerol 2 followed by separation in high yields of individual geometric isomers of cis- and trans-2-n-alkyl-5-

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hydroxy-1,3-dioxanes, cis-3a,b and trans-3a,b, followed by sulfation with sulfur trioxide-pyridine complex, and finally neutralization with NaOH, KOH, and NH4OH, resp. Phys. prop. of the compds. and some surface properties of 2-n-nonyl derivs. such as critical micelle concentration (CMC), effectiveness of aqueous surface tension reduction (f(CMC)), surface excess concentration (f(CMC)), and the surface area demand per mol. (ACMC), were determined. It was shown that the surface activity of these compds. is influenced both by their geometric structure and by the monovalent counter-ion.

IT 186189-03-7P 186189-04-8P 186189-05-9P  
259738-92-6P 259738-93-7P 259738-94-8P  
259738-95-9P 259738-96-0P 259738-97-1P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (synthesis and surface properties of chemodegradable diastereomeric (alkyldioxanyl) sulfate anionic surfactants with monovalent counter-ions)  
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 08 Dec 1999

ACCESSION NUMBER: 1999:774192 HCAPLUS Full-text

DOCUMENT NUMBER: 132:13333

TITLE: Dioxolanes as (intermediates for) surfactants, their preparation, and acid decomposition

INVENTOR(S): Nakamura, Masaki; Nomura, Hiroshi; Miyamoto, Masanori; Hasegawa, Akira

PATENT ASSIGNEE(S): Osaka City, Japan; Teshima Kaken K. K.

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

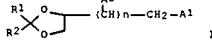
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11335371	A2	19991207	JP 1998-138241	19980520
JP 3049390	B2	20000605	JP 1998-138241	19980520

PRIORITY APPLN. INFO.:

GI



AB Dioxolanes I [R1 = Ra(ORb)y; Ra = C6-22 alkyl, alkenyl, alkynyl, (substituted) aryl; Rb = C2-4 alkylene; y = 0-20; R2 = Me, Et; n = 0, 1; A1, A2 = OH, OSO3H; M = H, alkali metal, alkaline earth metal, ammonium, C1-5 alkylammonium, basic amino acid residue], which are decomposed into ketones, glycerin, erythritol, etc. by treatment with acids, are prepared by sulfation

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CODEN: JPCBFK; ISSN: 1089-5647  
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A systematic study concerning adsorption and aggregation of chemodegradable, diastereomerically pure Na cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl) sulfates (alkyl: n-C9H19 and n-C11H23) in the system consisting of n-heptane in contact with aqueous 0.2M NaCl at 31° was undertaken. The role of the 6-membered 1,3-dioxane ring was discussed in terms of comparison between studied surfactants and classical Na decyl and dodecyl sulfates. Surface parameters of compds. under study at the oil-H2O interface, i.e., surface tension reduction (X), surface excess concentration (Γ), surface area demand per mol. (A), critical micelle concentration (cmc), standard free energy of adsorption (ΔGads), and of micellization (ΔGcmc), show differences due to the adsorption and interfacial tensions of diastereomerically pure sodium cis- and trans-(alkyl dioxanyl) sulfates at heptane-aqueous NaCl systems and to the hydrophilic, i.e., sulfate group configuration at the C-5 atom of the 1,3-dioxane ring. The cmc, ΔGads, and ΔGcmc values are lower for the trans isomers than for the cis ones, whereas the effectiveness of surface tension reduction is nearly the same for both isomers. Addnl., the interfacial tensions of the studied acetal-type isomers were described for the heptane-aqueous NaCl systems containing Aerosol OT. According to findings the configuration of the -OSO3Na polar group at the C-5 C atom of the 1,3-dioxane ring, i.e., equatorial in trans isomers and axial in cis isomers, involves diastereomeric differentiation in the aggregation abilities.

IT 186189-03-7 186189-04-8 186189-05-9

186189-06-0  
RL: PRP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process) (adsorption and interfacial tensions of diastereomerically pure sodium cis- and trans-(alkyldioxan-yl) sulfates at heptane-water interface)

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 28 Sep 1999

ACCESSION NUMBER: 1999:619226 HCAPLUS Full-text

DOCUMENT NUMBER: 132:238708

TITLE: Synthesis and properties of sulfate- and polyoxyethylene-type chemodegradable surfactants bearing a 1,3-dioxolane ring

AUTHOR(S): Yamamura, Shingo; Ono, Daisuke; Nakamura, Masaki; Shizuma, Motohiro; Tamai, Toshiyuki; Tekeda, Tokuji

CORPORATE SOURCE: Osaka Municipal Tech. Res. Inst., Osaka, 536-8553, Japan

SOURCE: Kagaku to Kogyo (Osaka) (1999), 73(9), 419-425

CODEN: KKKOAG; ISSN: 0368-5918

PUBLISHER: Osaka Koken Kyoka

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Chemodegradable anionic and nonionic surfactants bearing a 1,3-dioxolane ring were prepared by the acid-catalyzed condensation of ketones and glycerol, followed by sulfation or ethoxylation. These surfactants had good surface activity and detergency, and were easily hydrolyzed under acidic conditions.

IT 251453-51-7P (2-Methyl-2-nonyl-1,3-dioxolan-4-yl)methyl sulfate sodium salt 261963-60-4P, (2-Methyl-2-undecyl-1,3-

dioxolan-4-yl)methyl sulfate sodium salt

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (anionic surfactant; preparation of chemodegradable surfactants bearing dioxolane ring)

L5 ANSWER 23 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 16 Jun 1999

ACCESSION NUMBER: 1999:371434 HCAPLUS Full-text

DOCUMENT NUMBER: 131:134992

TITLE: Adsorption of Diastereomerically Pure Sodium cis- and trans-(2-n-Alkyl-1,3-dioxan-5-yl) Sulfates at the n-Heptane-Water Interface

AUTHOR(S): Sokolowski, Adam; Zielenka, Barbara; Piatecki, Andrzej; Wilk, Kazimiera A.; Burczyk, Bogdan

CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.

SOURCE: Journal of Physical Chemistry B (1999), 103(26), 5512-5516

PATENT INFORMATION:

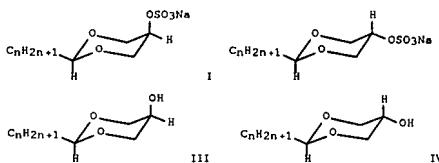
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 175563	B1	19990129	PL 1994-306516	19941223
			PL 1994-306516	19941223

OTHER SOURCE(S): MARPAT 130:311801

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PRIORITY APPLN. INFO.:

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AB The title compds. (I or II; n = 7-13), potentially useful as surfactants (no data), were prepared by reacting cis- (or trans)-2-alkyl-5-hydroxy-1,3-dioxanes (III or IV) with ClSO3H in CC14 in the presence of pyridine followed by treatment of the intermediate with alc.-H2O solution of NaOH, Na2CO3 or NaHCO3 or by reacting III or IV with C5H5N-SO3 in CC14 followed by treatment of the intermediate with alc.-aqueous solution of NaOH, Na2CO3 or NaHCO3.

IT 186189-03-7P 186189-06-0P 123537-63-1P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation); (preparation of novel sodium sulfates of 1,3-dioxane derivs.)

L5 ANSWER 25 OF 41 HCPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 31 Dec 1997

ACCESSION NUMBER: 1997:808663 HCPLUS Full-text

DOCUMENT NUMBER: 128:63196  
Chemical structure and surface activity. XXXII.

TITLE: Synthesis and surface properties of chemodegradable surfactants: sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfates

AUTHOR(S): Piasiecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam; Mayhew, Aleksandra; Wilk, Kazimierz A.

CORPORATE SOURCE: INSTITUTE OF ORGANIC AND POLYMER TECHNOLOGY, TECHNICAL UNIVERSITY OF WROCŁAW, WROCŁAW, 50-370, Pol.

SOURCE: Bulletin of the Polish Academy of Sciences, Chemistry (1997), 45(3), 329-337

CODEN: BPACQ; ISSN: 0239-7285

PUBLISHER: Polish Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfates (alkyl: n-C7H15, n-C9H19 and n-C11H23) were synthesized by reaction of aliphatic aldehydes and 1,1,1-tris(hydroxymethyl)ethane, followed by sulfation with sulfur trioxide-pyridine complex and neutralization with NaHCO3 (NaOH) of the intermediate mixts. of cis- and trans-2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes or individual cis-isomers. Some of their surface properties at the aqueous solution-air interface were determined

IT 139888-69-0P 139888-70-3P 139888-72-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material

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use); PREP (Preparation); USES (Uses) (synthesis and surface properties of chemodegradable sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfates)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 41 HCPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 06 Sep 1997

ACCESSION NUMBER: 1997:569475 HCPLUS Full-text

DOCUMENT NUMBER: 127:308641

TITLE: Synthesis, surface properties, and hydrolysis of chemodegradable anionic surfactants: diastereomerically pure cis- and trans-2,5-disubstituted-1,3-dioxanes

AUTHOR(S): Piasiecki, Andrzej; Sokolowski, Adam; Burczyk, Bogdan; Gancarz, Roman; Kotlowska, Urszula

CORPORATE SOURCE: Institute of Organic Polymer Technology, Technical University of Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Journal of Colloid and Interface Science (1997), 192(1), 74-82

CODEN: JCISAS; ISSN: 0021-9797

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Two new groups of anionic surfactants, sodium cis- and trans-(2-n-undecyl-1,3-dioxan-5-yl)methyl sulfates and sodium cis- and trans-3-[(2-n-undecyl-1,3-dioxan-5-yl)oxy]propanesulfonates, were synthesized and investigated. Surface properties of these surfactants, i.e., surface excess concentration,  $\Gamma$ , surface area demand per mol, A, effectiveness of surface tension reduction,  $\Pi$ , critical micelle concentration, CMC, and standard free energies of adsorption,  $\Delta G_{ads}$ , and of micellization,  $\Delta G_{mic}$ , were determined. The trans-isomers, in which the configuration of the polar group is equatorial, are more surface active than the cis-isomers with axial configuration of the polar group at the C-5 carbon atom of the 1,3-dioxane ring. The surfactants under study undergo easy hydrolysis reaction in DCl/D2O solution with cleavage of the 1,3-dioxane ring to nonsurface active intermediates. The trans-isomers are hydrolyzed faster than the cis-isomers.

IT 197294-67-0P 197294-68-1P 197294-69-2P

197294-70-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (synthesis, surface properties, and hydrolysis of diastereomerically pure cis- and trans-2,5-disubstituted-1,3-dioxane anionic surfactants)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 27 OF 41 HCPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 11 Mar 1997

ACCESSION NUMBER: 1997:164886 HCPLUS Full-text

DOCUMENT NUMBER: 126:145606

TITLE: Synthesis, Surface Properties, and Hydrolisis of Chemodegradable Anionic Surfactants: Diastereomerically Pure Sodium cis- and trans-2-n-Alkyl-1,3-dioxan-5-yl Sulfates

AUTHOR(S): Piasiecki, Andrzej; Sokołowski, Adam; Burczyk,

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CORPORATE SOURCE: Bogdan; Gancarz, Roman; Kotlowska, Urszula Institute of Organic and Polymer Technology and Institute of Organic Chemistry Biochemistry and Biotechnology, Technical University of Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Langmuir (1997), 13(6), 1434-1439

CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A systematic study concerning the synthesis, adsorption, micellization, and hydrolytic decomposition of new, chemodegradable and diastereomerically pure sodium cis- and trans-2-n-alkyl-1,3-dioxan-5-yl sulfates (alkyl: n-C7H15, n-C9H19, and n-C11H23) has been undertaken. Surface parameters of the compds. under study at the aqueous solution/air interface, i.e., surface tension reduction, surface excess concentration, surface area demand per mol, and standard free energy of adsorption and micellization, i.e., sulfate, group configuration at the 1,3-dioxane ring. The cmc values are lower for the trans-isomers than for the cis-isomers, the  $\Delta G_{ads}$  and  $\Delta G_{cmc}$  values are lower for trans-isomers, and the effectiveness of surface tension reduction is higher for the cis-isomers than for the trans-isomers. The investigated compds. undergo an easy hydrolysis reaction of the acetal function, leading to starting aldehydes and sulfated glycerol. The trans-isomers are hydrolyzed much faster than cis-isomers, and no isomerization reaction of the type cis  $\rightarrow$  trans is observed during the hydrolysis process.

IT 186189-01-5P 186189-02-6P 186189-03-7P

186189-04-9P 186189-05-9P 186189-06-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis, surface properties, and hydrolysis of chemodegradable sodium cis- and trans-2-n-alkyl-1,3-dioxan-5-yl sulfate anionic surfactants)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 28 OF 41 HCPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 08 Feb 1997

ACCESSION NUMBER: 1997:91830 HCPLUS Full-text

DOCUMENT NUMBER: 126:119361

TITLE: Chemical structure and activity. XXX. Synthesis and surface properties of chemodegradable anionic surfactants: sodium (2-n-alkyl-1,3-dioxan-5-yl)sulfates

AUTHOR(S): Piasiecki, Andrzej; Sokolowski, Adam; Burczyk, Bogdan; Kotlowska, Urszula

CORPORATE SOURCE: Inst. Organic Polymer Technology, Technical Univ. Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Journal of the American Oil Chemists' Society (1997), 74(1), 33-37

CODEN: JAOCA7; ISSN: 0003-021X

PUBLISHER: AOCS Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the reaction of cis- and trans-2-n-alkyl-5-hydroxy-1,3-dioxane mixts. with SO3-pyridine complex, followed by neutralization with NaOH or Na2CO3, a new group of anionic surfactants, i.e., Na cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl)sulfates were obtained. The hydrophobic intermediates used in the sulfation reaction were obtained in high yields from 4-component glycerol acetals by the process of transesterification and selective crystallization of

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1,3-dioxane derivs. The phys. data of the new compds. and some of their surface properties, such as critical micelle concentration, effectiveness of water surface tension reduction, standard free energies of adsorption and micellization, surface excess concentration, and the surface area demand per mol, were determined. The surface activity of the standard anionic surfactant Na dodecyl sulfate should be similar to the surface activity of Na (2-n-decyl-1,3-dioxan-5-yl)sulfate.

IT 186302-97-6P, 2-Octyl-1,3-dioxolan-5-yl sulfate sodium salt

186302-98-7P, 2-Decyl-1,3-dioxolan-5-yl sulfate sodium salt

186302-99-8P, 2-Dodecyl-1,3-dioxolan-5-yl sulfate sodium salt

RL: SPN (Synthetic preparation); PREP (Preparation) (synthesis and surface properties of chemodegradable anionic surfactants sodium (alkyldioxanyl)sulfates)

L5 ANSWER 29 OF 41 HCPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Jul 1995

ACCESSION NUMBER: 1995:673889 HCPLUS Full-text

DOCUMENT NUMBER: 123:59616

TITLE: Manufacturing surface-active sodium sulfate derivatives of 2,5-di- and 2,2,5-trisubstituted 5-hydroxymethyl-1,3-dioxanes

INVENTOR(S): Piasiecki, Andrzej; Burczyk, Bogdan

PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.

SOURCE: Pol., 5 pp.

CODEN: POXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Polish

FAMILY ACC. NUM. COUNT: 1

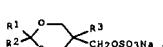
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 162441	B1	19931231	PL 1990-283199	19900103

PRIORITY APPLN. INFO.: PL 162441 B1 19931231 PL 1990-283199 19900103

OTHER SOURCE(S): MARPAT 123:59616

GI



AB Title surfactants I ( $R_1 = C_{10}H_{21}+1$ , Ph, or  $C_{12}H_{25}+1C_6H_4$ ,  $a = 5-15$ ,  $b = 1-12$ ,  $R_2 = H$  or  $C_{12}H_{25}+1$ ,  $c = 1-8$ ,  $R_1R_2 = C_{12}H_{25}d$ ,  $d = 5-12$ ,  $R_3 = Me$  or  $Et$ ) are manufactured by reaction of the corresponding hydroxymethylidioxane with C5H5N and ClSO3H in a solvent such as CC14 at 260-320K and dioxane derivative-ClSO3H-C5H5N mol ratio 1:(1-1.1):(2.1-2.5) or with a C5H5N-SO3 complex (II) in a solvent such as CC14 at dioxane derivative-II mol ratio 1:(1-1.1) and 260-320K, evaporation of the reaction mixture, dissolution of the evaporated product in an aqueous alc. solution of NaOH, NaHCO3, or Na2CO3, and evaporation of the solvent.

IT 143492-00-2P 143492-02-4P

RL: IMF (Industrial manufacture); PREP (Preparation) (manufacturing surface-active sodium sulfate derivs. of 2,5-di- and

24

2,2,5-trisubstituted 5-hydroxymethyl-1,3-dioxanes)

LS ANSWER 30 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 16 Apr 1994  
 ACCESSION NUMBER: 1994:194530 HCAPLUS Full-text  
 DOCUMENT NUMBER: 120:194530  
 TITLE: Studies on synthesis and properties of surfactants with specific functions  
 AUTHOR(S): Yamamura, Shingo  
 CORPORATE SOURCE: Osaka Univ. Tech. Res. Inst., Osaka, 536, Japan  
 SOURCE: Yukagaku (1994), 43(1), 2-9  
 CODEN: YNGKAM; ISSN: 0513-398X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese  
 AB Novel surfactants with specific functions were synthesized from inexpensive, com. available bulk chems. by convenient synthetic methods. All were characterized by features such as chemical degradability, catalytic activity for a halide displacement reaction (Finkelstein reaction), ability to disperse lime soap, and complex with alkali metal cations. Applications for emulsion polymerization, surface-active properties, stability consts. of complexes with alkali metal ions, and solubilization of alkali metal picrates in organic solvents were studied.  
 IT 139487-16-8P 139487-17-9P 139487-18-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and surfactant properties of)

LS ANSWER 31 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 04 Oct 1992  
 ACCESSION NUMBER: 1992:533335 HCAPLUS Full-text  
 DOCUMENT NUMBER: 117:133335  
 TITLE: Chemical structure and surface activity. XXV. Synthesis and surface properties of chemodegradable anionic surfactants: sodium salts of sulfated 2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes  
 AUTHOR(S): Sokolowski, Adam; Piasiecki, Andrzej; Burczyk, Bogdan  
 CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ. Wroclaw, Wroclaw, 50-370, Pol.  
 SOURCE: Journal of the American Oil Chemists' Society (1992), 69(7), 633-8  
 CODEN: JAOCA7; ISSN: 0003-021X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB In acid-catalyzed reactions of Cn-alkanecarboxaldehydes (n = 5, 7, 9, 11) with Me(C<sub>2</sub>H<sub>5</sub>O)<sub>3</sub>, 2-(n-alkyl)-5-(hydroxymethyl)-5-methyl-1,3-dioxanes were obtained. The dioxanes were sulfated with SO<sub>3</sub>-pyridine complex in dry CC<sub>14</sub> solution to obtain the title anionic surfactants. The surfactants could be readily hydrolyzed and oxidized to nonsurfactant compds. Phys. data and some surface properties, such as Krafft point, critical micelle concentration (CMC), surface tension of aqueous solution near CMC, and wetting and foaming properties, were determined. The surfactants exhibited aqueous solution properties similar to those of the well-known [R(OCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>OSO<sub>3</sub>Na]. The presence of the 5-methyl-1,3-dioxane moiety in the mols. introduced hydrophobic character comparable to the effect of three oxyethylene groups or of two methylene groups of the alkyl chain in [R(OCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>OSO<sub>3</sub>Na] with equal R value.  
 IT 143481-99-6P 143482-00-2P 143482-01-3P  
 143482-02-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)

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AB cis-, trans- Or a mixture of cis- and trans-(hydroxymethyl)dioxanes I [R = 4-Me<sub>6</sub>H<sub>4</sub>, Me(CH<sub>2</sub>)<sub>6</sub>, Me(CH<sub>2</sub>)<sub>10</sub>, R<sub>1</sub> = H] were sulfated with sulfur trioxide-pyridine complex in CC<sub>14</sub>/pyridine to give I (R<sub>1</sub> = SO<sub>3</sub>Na) as the pure cis- or trans-isomers.  
 IT 139988-69-0P 139988-70-3P 139988-71-4P  
 139988-72-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

LS ANSWER 34 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 21 Feb 1992  
 ACCESSION NUMBER: 1992:62074 HCAPLUS Full-text  
 DOCUMENT NUMBER: 116:62074  
 TITLE: Synthesis and properties of degradable anionic surfactants with a 1,3-dioxolane ring and their use as emulsifier for emulsion polymerization  
 AUTHOR(S): Yamamura, Shingo; Nakamura, Masaki; Kasai, Kiyoshi; Sato, Hozumi; Takeda, Tokaji  
 CORPORATE SOURCE: Osaka Univ. Tech. Res. Inst., Osaka, 536, Japan  
 SOURCE: Yukagaku (1991), 40(11), 1002-6  
 CODEN: YNGKAM; ISSN: 0513-398X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Degradable anionic surfactants with a 1,3-dioxolane ring were prepared and their surface properties determined. These surfactants contain a sulfonate group as the anionic hydrophile, and readily decompose under weakly acidic conditions. As surfactants for emulsion polymerization reactions, they are considerably superior to the conventional surfactants which give polymers containing higher contents of metals than the above surfactants.  
 IT 139487-16-8P 139487-17-9P 139487-18-0P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (surfactants, preparation and surface properties of)

LS ANSWER 35 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 23 Jun 1990  
 ACCESSION NUMBER: 1990:235732 HCAPLUS Full-text  
 DOCUMENT NUMBER: 112:235732  
 TITLE: An efficient route to 3-deoxy-D-manno-2-octulosonic acid (KDO) derivatives via a 1,4-cyclic sulfate approach  
 AUTHOR(S): Van der Klein, P. A. M.; Boons, G. J. P. H.; Veeneman, G. H.; Van der Marel, G. A.; Van Boom, J. H.  
 CORPORATE SOURCE: Gorlaeus Lab., Leiden, 2300 RA, Neth.  
 SOURCE: Tetrahedron Letters (1989), 30(40), 5477-80  
 CODEN: TELEAV; ISSN: 0040-4039  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 112:235732  
 GI

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10/516418  
 (preparation and surfactant properties of)

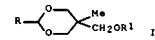
LS ANSWER 32 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 31 May 1992  
 ACCESSION NUMBER: 1992:215135 HCAPLUS Full-text  
 DOCUMENT NUMBER: 116:215135  
 TITLE: Preparation of butadiene copolymers with low metal content  
 INVENTOR(S): Kasai, Kiyoshi; Sato, Hozumi; Takeda, Tokaji;  
 PATENT ASSIGNEE(S): Yamamura, Shingo; Nakamura, Masaki  
 CITY OF Japan Synthetic Rubber Co., Ltd., Japan; Osaka,  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03281602	A2	19911212	JP 1990-81148	19900330
PRIORITY APPLN. INFO.:		JP 1990-81148 19900330		

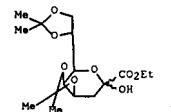
AB The title polymers having metal content <200 ppm, and useful in the electronic applications, are prepared by emulsion polymerization in the presence of acid-hydrolyzable surfactants bearing 1,3-dioxolane rings. Thus, emulsion polymerization of 65 parts butadiene with 35 parts acrylonitrile in the presence of 2 parts 2-methyl-2-undecyl-3-carboxy-5-methyl-1,3-dioxolane Na salt (I), and 0.01 part Na hydroxymethanesulfonate and treating the resulting polymer emulsions with 1% HCl gave polymers containing 15 ppm Na, vs 120 for polymers prepared without I.

IT 141186-39-2  
 RL: USES (Uses) (surfactants, for manufacture of butadiene copolymers with low metal content)

LS ANSWER 33 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 17 Apr 1992  
 ACCESSION NUMBER: 1992:151685 HCAPLUS Full-text  
 DOCUMENT NUMBER: 116:151685  
 TITLE: Acetals and ethers. XXI. Preparation of diastereomerically pure sodium salts of sulfated 2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes  
 AUTHOR(S): Piasiecki, Andrzej  
 CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ. Wroclaw, Wroclaw, 50-370, Pol.  
 SOURCE: Synthetic Communications (1992), 22(3), 445-51  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): SYNCNAV; ISSN: 0039-7911  
 GI CASREACT 116:151685



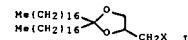
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AB Treatment of 2,3:5,6-di-O-isopropylidene-D-mannitol with thionyl chloride followed by oxidation gave the resp. 1,4-cyclic sulfate. Ring opening of the cyclic sulfate with the anion of Et 1,3-dithiane-2-carboxylate, and subsequent acidolysis and unmasking of the thionketal, afforded KDO derivative I in an excellent yield.

IT 127244-79-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and hydrolysis of)

LS ANSWER 36 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ED Entered STN: 30 Apr 1989  
 ACCESSION NUMBER: 1989:156549 HCAPLUS Full-text  
 DOCUMENT NUMBER: 110:156549  
 TITLE: Preparation and characterization of glycerol-based cleavable surfactants and derived vesicles  
 AUTHOR(S): Jaeger, David A.; Jamrozik, Janusz; Golich, Timothy G.; Cleman, Malgorzata Wegrzyn; Mohabeian, Jamsheed  
 CORPORATE SOURCE: Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA  
 SOURCE: Journal of the American Chemical Society (1989), 111(9), 3001-6  
 DOCUMENT: JACSA7; ISSN: 0002-7863  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB Vesicles of I [X = N+Me3 MeSO3- (II); X = N+Me3 Br- (III); and X = O(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>- Na<sup>+</sup> (IV)] were prepared by sonication and characterized by <sup>1</sup>H NMR line width narrowing, dynamic laser light scattering, DSC, and dye entrapment and leakage studies. In vesicular form, the hydrolytic stability of IV was greater than that of II/III, due to a combination of electrostatic effects resulting from the different substituents on the dioxolane ring. Neutral organic compds. could be readily isolated from vesicular solns. of IV after its hydrolysis. Thus, IV was appropriate for the application of vesicular media to preparative chemical I (X = N+Me2(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>-) was prepared but did not readily disperse in water upon sonication.

IT 119295-62-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

28

RACT (Reactant or reagent)  
(preparation and hydrolysis of)

LS ANSWER 37 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 12 May 1984  
ACCESSION NUMBER: 1983:107200 HCAPLUS Full-text  
DOCUMENT NUMBER: 98:107200  
TITLE: Cyanine dyes, new potent antitumor agents  
AUTHOR(S): Minami, Isao; Kozai, Yoshio; Nomura, Hiroaki; Tashiro, Tetsuko  
CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind. Ltd., Osaka, 532, Japan  
SOURCE: Chemical & Pharmaceutical Bulletin (1982), 30(9), 3106-20  
CODEN: CPBTAL; ISSN: 0009-2363  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 98:107200  
AB A number of cyanines with mono-, di- and tricyclic nuclei, merocyanines and oxonoles were prepared and screened for antitumor activity against P388 leukemic and B16 melanoma. Among these compds., monomethin-, trimethin- and pentamethincyanines having naphthothiazole, naphthoxazole, and benzindole nuclei significantly prolonged the survival time of tumor-bearing mice. Replacement of the conjugated chain system between the 2 nuclei with a saturated aliphatic chain produced a marked decrease in the antitumor activity. Structure-activity relationships are discussed.  
IT 64834-19-57  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction of, with methylthionaphthothiazolium salt)  
IT 84846-66-29  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction of, with methylnaphthothiazolium salt)  
IT 84833-76-19  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction of, with naphthothiazoles)

LS ANSWER 38 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 12 May 1984  
ACCESSION NUMBER: 1976:407606 HCAPLUS Full-text  
DOCUMENT NUMBER: 85:7606  
TITLE: Dioxolane derivatives having surfactant properties  
INVENTOR(S): McCoy, David R.  
PATENT ASSIGNEE(S): Texaco Inc., USA  
SOURCE: U.S., 6 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3948953	A	19760406	US 1969-847729	19690805
US 3909460	A	19750930	US 1973-387426	19730308
PRIORITY APPLN. INFO.: US 1969-847729 A2 19690805				

10/516418

DE 2210752 A 19720921 DE 1972-2210752 19720306  
US 3770743 A 19731106 US 1971-122144 19710308  
FR 2128713 A5 19721020 FR 1972-7923 19720307  
FR 2128713 B1 19750801 19720307  
GB 136547 A 19731107 GB 1972-10550 19720307  
CA 1003837 A1 19770118 CA 1972-136438 19720307  
PRIORITY APPLN. INFO.: US 1971-122144 A 19710308

GI For diagram(s), see printed CA Issue.  
AB The title compds. [I, n = 3 (II), 4, 5] and (or) their salts with HCl or citric acid; useful as analgesics, spasmolytics, blood pressure lowering, and alpha-adrenergic blocking drugs, were prepared by hydrolysis of the di-dioxolanes [III, R = Me, Et; R1 = Me, Ph]. Thus, HOCH2-CH(OH)CH2OH was refluxed with Me2CO to give 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl, which was esterified with MeSO2Cl to give 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl methanesulfonate. This was heated with 1-phenylpiperazine to give III (R = R1 = Me), which was refluxed with concentrated HCl in EtOH to give II.2HCl.  
IT 37939-45-0P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

LS ANSWER 41 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 12 May 1984  
ACCESSION NUMBER: 1972:551582 HCAPLUS Full-text  
DOCUMENT NUMBER: 77:151582  
TITLE: Synthesis of (+)-trimethylsquirin C alternative acid-catalyzed cyclization pathways for (+)-trimethylsquirin C relatives  
AUTHOR(S): Davies, R. V.; Whiting, D. A.  
CORPORATE SOURCE: Dep. Chem., Univ. Nottingham, Nottingham, UK  
SOURCE: Tetrahedron Letters (1972), (36), 3849-52  
CODEN: TELEAY; ISSN: 0040-4039  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB Trimethylsquirin C (I) was prepared by condensation of the dioxolane (II) with p-MeOC6H4C.tplbond.CH to give the acetylenic alc., which was reduced by LiAlH4 to the olefin (III; R = OH). Further reduction of III (R = OSO3H) gave III (R = H), which was hydrolyzed to I.  
IT 38340-02-2 38340-22-6  
RL: RCT (Reactant); RACT (Reactant or reagent) (reduction of)

FILE 'REGISTRY' ENTERED AT 12:09:58 ON 04 DEC 2006  
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10/516418

AB The reaction of glycerol (56-81-5) with C13-15 aliphatic ketones gave 2,2-dialkyl-4-hydroxymethyl-1,3-dioxolanes which were ethoxylated, sulfated (with 1:1 molar ClSO3H-Et2O [59263-80-8]), or phosphorylated with POCl3 to prepare surfactants with higher detergency than com. ethoxylated alcs. or sulfates of ethoxylated alcs. Thus, a mixture of glycerol 137, p-MeC6H4SO3H, 5 benzene 500, and C10-15 aliphatic ketones 260 parts was heated 65 hr to prepare a mixture of 2,2-dialkyl-4-hydroxymethyl-1,3-dioxolanes which were mixed with 1% KOH and treated with ethylene oxide [75-21-8] (5.3 moles/mole dioxolane) to prepare a surfactant.  
IT 59263-78-4 59263-79-5  
RL: USES (Uses) (detergents)

LS ANSWER 39 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 12 May 1984  
ACCESSION NUMBER: 1975:607840 HCAPLUS Full-text  
DOCUMENT NUMBER: 82:207840  
TITLE: Detergent compositions containing dioxolanes as surfactants  
INVENTOR(S): McCoy, David R.  
PATENT ASSIGNEE(S): Texaco Inc., USA  
SOURCE: U.S., 6 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3909460	A	19750930	US 1973-387426	19730810
US 3948953	A	19760406	US 1969-847729	19690805
PRIORITY APPLN. INFO.: US 1969-847729 A2 19690805				

AB 2-Methyl-4-methylol-2-nonyl-1,3-dioxolane [6542-98-9] and similar 2,2-dialkyl 4-methylol-1,3-dioxolanes, prepared from glycerol [56-81-5] and C13-15 dialkyl ketones, were ethoxylated or sulfated to prepare surfactants with good solubility in water, good detergency in laundering, and light color. Thus, glycerol was condensed with C10-15 dialkyl ketones in benzene containing p-MeC6H4SO3H to prepare 2,2-dialkyl-4-methylol-1,3-dioxolanes which reacted with 5.2 moles ethylene oxide [75-21-8] to prepare a surfactant.  
IT 57413-41-9  
RL: USES (Uses) (detergents)

LS ANSWER 40 OF 41 HCAPLUS COPYRIGHT 2006 ACS on STN  
ED Entered STN: 12 May 1984  
ACCESSION NUMBER: 1972:564761 HCAPLUS Full-text  
DOCUMENT NUMBER: 77:164761  
TITLE:  $\omega$ -(4-Phenyl-1-piperazinyl)alkane-1,2-diols  
INVENTOR(S): Hardie, Waldo Richard; Tankersley, Donald L.  
PATENT ASSIGNEE(S): Cutler Laboratories Inc.  
SOURCE: Ger. Offen., 16 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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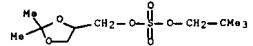
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10/516418

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$\Rightarrow$  d 1,5,7,8,14,17,18,24,25,33,36,37,41,44,50,53-55,59,62-67,69,70,72 ide can

L6 ANSWER 1 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 911829-70-4 REGISTRY  
ED Entered STN: 01 Nov 2006  
CN INDEX NAME NOT YET ASSIGNED  
MF C11 H22 O6 S  
SR CA  
LC STN Files: CA, CAPLUS



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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

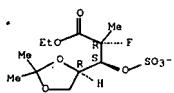
REFERENCE 1: 145:418420

L6 ANSWER 5 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 879551-05-0 REGISTRY  
ED Entered STN: 07 Apr 2006  
CN D-threo-Pentonic acid, 2-oxo-2-fluoro-2-methyl-4,5-O-(1-methylthiylidene)-, ethyl ester, hydrogen sulfate, ion(1-), (2R)-, N,N,N-triethylselenaminium (SC1) (CA INDEX NAME)  
PS STEREOSEARCH  
MF C11 H18 F O8 S . C8 H20 N  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 879551-02-7  
CMF C11 H18 F O8 S

Absolute stereochemistry.



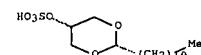
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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 144:312289

L6 ANSWER 7 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 512204-29-4 REGISTRY  
ED Entered STN: 08 May 2003  
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, cesium salt, cis- (9CI)  
(CA INDEX NAME)  
FS STEREOSEARCH  
MF C15 H30 O6 S . Cs  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (714193-05-2)

Relative stereochemistry.



● Cs

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

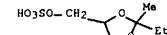
REFERENCE 1: 138:323055

L6 ANSWER 8 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 512203-09-3 REGISTRY  
ED Entered STN: 08 May 2003

33

34

CRN (752191-80-3)

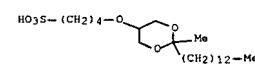


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:29655

L6 ANSWER 18 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 308818-17-9 REGISTRY  
ED Entered STN: 15 Dec 2000  
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxan-5-yl)oxy]-, sodium salt (9CI) (CA INDEX NAME)  
MF C22 H44 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (791771-46-5)

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

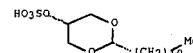
REFERENCE 1: 134:2339

L6 ANSWER 24 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 261963-60-4 REGISTRY  
ED Entered STN: 17 Apr 2000  
CN 1,3-Dioxolan-4-methanol, 2-methyl-2-undecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN (2-Methyl-2-undecyl-1,3-dioxolan-4-yl)methyl sulfate sodium salt  
MF C16 H32 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (686261-33-6)

35

10/516418  
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, lithium salt, cis- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C15 H30 O6 S . Li  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (714193-05-2)

Relative stereochemistry.

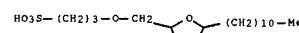


● Li

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:323055

L6 ANSWER 14 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 333952-55-9 REGISTRY  
ED Entered STN: 02 May 2001  
CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)  
MF C18 H36 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (779315-35-4)



● Na

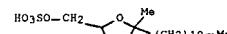
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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:202175

REFERENCE 2: 134:297503

L6 ANSWER 17 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 311820-48-1 REGISTRY  
ED Entered STN: 28 Dec 2000  
CN 1,3-Dioxolane-4-methanol, 2-ethyl-2-methyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)  
MF C7 H14 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT

34



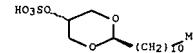
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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:238708

L6 ANSWER 25 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 259738-97-1 REGISTRY  
ED Entered STN: 22 Mar 2000  
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, trans- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C15 H30 O6 S . H3 N  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (742046-98-4)

Relative stereochemistry.



● NH3

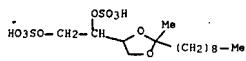
2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:336866

REFERENCE 2: 132:196127

L6 ANSWER 33 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 251453-54-0 REGISTRY  
ED Entered STN: 21 Dec 1999  
CN 1,2-Ethanediol, 1-(2-methyl-2-nonyl-1,3-dioxolan-4-yl)-, bis(hydrogen sulfate), disodium salt (9CI) (CA INDEX NAME)  
MF C15 H30 O10 S2 . 2 Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (781601-10-3)

36

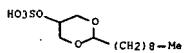


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:13333

L6 ANSWER 36 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 223537-63-1 REGISTRY  
ED Entered STN: 21 May 1999  
CN 1,3-Dioxolan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)  
MF C13 H26 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (744104-99-4)



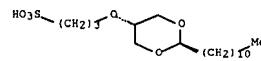
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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:311801

L6 ANSWER 37 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 197294-70-5 REGISTRY  
ED Entered STN: 14 Nov 1997  
CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt, trans- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C18 H36 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (751462-50-7)

Relative stereochemistry.

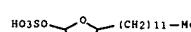


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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:30861

L6 ANSWER 41 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 186302-99-8 REGISTRY  
ED Entered STN: 20 Feb 1997  
CN 1,3-Dioxolan-4-ol, 2-dodecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2-Dodecyl-1,3-dioxolan-5-yl sulfate sodium salt  
MF C15 H30 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (784119-41-1)



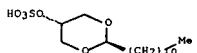
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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:119361

L6 ANSWER 44 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 186189-06-0 REGISTRY  
ED Entered STN: 18 Feb 1997  
CN 1,3-Dioxolan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Sodium trans-2-undecyl-1,3-dioxolan-5-yl sulfate  
FS STEREOSEARCH  
MF C15 H30 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS, DETHERM\*  
(\*File contains numerically searchable property data)  
CRN (742046-88-4)

Relative stereochemistry.



● Na

6 REFERENCES IN FILE CA (1907 TO DATE)  
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:249430

REFERENCE 2: 133:336886

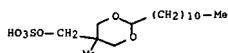
REFERENCE 3: 132:196127

REFERENCE 4: 131:134992

REFERENCE 5: 130:311801

REFERENCE 6: 126:145606

L6 ANSWER 50 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 143482-02-4 REGISTRY  
ED Entered STN: 16 Sep 1992  
CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)  
MF C17 H34 O6 S . Na  
SR CA  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)  
CRN (748740-13-8)



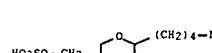
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2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 123:59616

REFERENCE 2: 117:133335

L6 ANSWER 53 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 143481-99-6 REGISTRY  
ED Entered STN: 16 Sep 1992  
CN 1,3-Dioxane-5-methanol, 5-methyl-2-pentyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)  
MF C11 H22 O6 S . Na

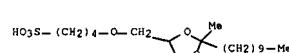


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 117:133335

L6 ANSWER 54 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 141186-39-2 REGISTRY  
ED Entered STN: 08 May 1992  
CN 1-Butanesulfonic acid, 4-[(2-decyl-2-methyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)  
MF C19 H38 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (739339-61-8)



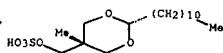
● Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:215135

L6 ANSWER 55 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 139888-72-5 REGISTRY  
ED Entered STN: 27 Mar 1992  
CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C17 H34 O6 S . Na  
SR CA  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CHEMINFORMRX  
(\*File contains numerically searchable property data)  
CRN (746574-81-2)

Relative stereochemistry.



● Na

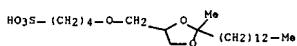
3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:249430

REFERENCE 2: 128:63186

REFERENCE 3: 116:151685

L6 ANSWER 59 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 138467-18-0 REGISTRY  
ED Entered STN: 24 Jan 1992  
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)  
MF C22 H44 O6 S . Na  
SR CA  
LC STN Files: CA, CAPLUS  
CRN (779294-25-6)



● Na

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:2339

REFERENCE 2: 120:194530

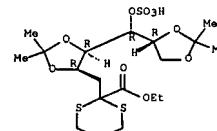
REFERENCE 3: 116:62074

L6 ANSWER 62 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 127246-79-5 REGISTRY  
ED Entered STN: 18 May 1990  
CN D-manno-2-Octulosonic acid, 3-deoxy-4,5:7,8-bis-O-(1-methylethylidene)-, ethyl ester, cyclic 2-(1,3-propanediyl dithioacetal), hydrogen sulfate (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN D-manno-2-Octulosonic acid, 3-deoxy-4,5:7,8-bis-O-(1-methylethylidene)-, ethyl ester, cyclic 2-(1,3-propanediyl mercaptone), hydrogen sulfate  
FS STEREOSEARCH  
MF C19 H32 O10 S3  
SR CA

41

LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.

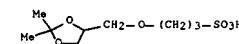


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 112:235732

L6 ANSWER 63 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 119296-62-7 REGISTRY  
ED Entered STN: 24 Feb 1989  
CN 1-Propanesulfonic acid, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)  
MF C9 H18 O6 S . Na  
SR CA  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)  
CRN (720658-06-0)



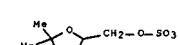
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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 110:156549

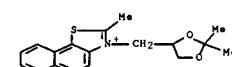
L6 ANSWER 64 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 94046-66-2 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Naphtho[2,1-d]thiazolium, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2-(methylthio)-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl sulfate (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1,3-Dioxolane-4-methanol, 2,2-dimethyl-, hydrogen sulfate, ion(1-), 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2-(methylthio)naphtho[2,1-

42



CM 2

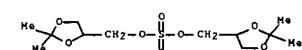
CRN 84834-17-3  
CMF C18 H20 N O2 S



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 98:107200

L6 ANSWER 66 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 94033-16-1 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1,3-Dioxolane-4-methanol, 2,2-dimethyl-, sulfate (2:1) (9CI) (CA INDEX NAME)  
MF C12 H22 O8 S  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, TOXCENTER  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 98:107200

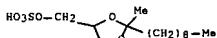
L6 ANSWER 67 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 59263-79-5 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, ammonium salt (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Ammonium 2-methyl-2-nonyl-1,3-dioxolane-4-ylmethyl sulfate  
MF C14 H28 O6 S . H3 N

REFERENCE 1: 98:107200

CM 1

CRN 84834-18-4  
CMF C6 H11 O6 S

LC STN Files: CA, CAPLUS, USPATFULL  
CRN (57413-41-9)

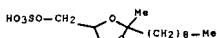


● NH3

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 85:7606

L6 ANSWER 69 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 57413-41-9 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate (9CI)  
(CA INDEX NAME)  
OTHER NAMES:  
CN Hydrogen 2-methyl-2-nonyl-1,3-dioxolan-4-ylmethyl sulfate  
MF C14 H28 O6 S  
CI COM  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

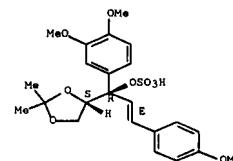
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 83:207840

L6 ANSWER 70 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 38340-22-6 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1,3-Dioxolane-4-methanol,  $\alpha$ -(3,4-dimethoxyphenyl)- $\alpha$ -(2-(4-methoxyphenyl)ethenyl)-2,2-dimethyl-, hydrogen sulfate, (R\*,S\*-(E))-  
(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C23 H28 O9 S  
LC STN Files: CA, CAPLUS

Relative stereochemistry.  
Double bond geometry as shown.

45

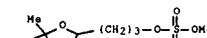


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 77:151582

L6 ANSWER 72 OF 72 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 37939-45-0 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Sulfuric acid, 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl methyl ester  
(9CI) (CA INDEX NAME)  
MF C9 H18 O6 S  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 77:164761

FILE 'CAOLD' ENTERED AT 12:13:23 ON 04 DEC 2006  
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COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907-1966  
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE

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display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

L7 O 16

FILE 'USPATFULL' ENTERED AT 12:13:33 ON 04 DEC 2006  
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 30 Nov 2006 (20061130/PD)  
FILE LAST UPDATED: 30 Nov 2006 (20061130/ED)  
HIGHEST GRANTED PATENT NUMBER: US7143445  
HIGHEST APPLICATION PUBLICATION NUMBER: US2006272066  
CA INDEXING IS CURRENT THROUGH 28 Nov 2006 (20061128/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 30 Nov 2006 (20061130/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

L8 5 16

L8 ANSWER 1 OF 5 USPATFULL on STN  
ACCESSION NUMBER: 20061144628 USPATFULL Full-text  
TITLE: Preparation of 2'-fluoro-2'-alkyl-substituted or other optionally substituted ribofuranosyl pyrimidines and purines and their derivatives  
INVENTOR(S): Chun, Byoung-Kwon, Robbinsville, NJ, UNITED STATES  
Wang, Peiyuan, Glen Rock, NJ, UNITED STATES  
Du, Jinfu, New Hope, PA, UNITED STATES  
Rachakonda, Suguan, Robbinsville, NJ, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006122146	A1	20060608
APPLICATION INFO.:	US 2005-225425	A1	20050913 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2004-609783P	20040914 (60)
	US 2004-610035P	20040915 (60)
	US 2005-666230P	20050329 (60)

DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903, US

NUMBER OF CLAIMS: 83  
EXEMPLARY CLAIM: 1  
LINE COUNT: 1933  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB The present invention provides (i) processes for preparing a 2'-deoxy-2'-fluoro-2'-methyl-D-ribonolactone derivatives, (ii) conversion of intermediate lactones to nucleosides with potent anti-HCV activity, and their analogues, and (iii) methods to prepare the anti-HCV nucleosides containing the 2'-deoxy-2'-fluoro-2'-C-methyl- $\beta$ -D-ribofuranosyl nucleosides from a preformed, preferably naturally-occurring, nucleoside.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 5 USPATFULL on STN  
ACCESSION NUMBER: 2006:11056 USPATFULL Full-text  
TITLE: Destructible surfactants and uses thereof  
INVENTOR(S): Mallet, Claude R, Attleboro, MA, UNITED STATES  
Russell, Reb J, Manlius, NY, UNITED STATES  
Yardley, Kurt, San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006094000	A1	20060504
APPLICATION INFO.:	US 2003-516419	A1	20030530 (10)
	WO 2003-US16819		20030530
			20050829 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-385018P	20020531 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	EDWARDS & ANGELL, LLP, P.O. BOX 55874, BOSTON, MA, 02205, US	

	NUMBER	DATE
NUMBER OF CLAIMS:	51	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Page(s)	
LINE COUNT:	1072	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Destructible surfactants and methods of using same are provided. The invention includes anionic surfactants having a dioxolane or dioxane functional group that enable degradation of the surfactant under acidic conditions. The invention also includes methods of using anionic surfactants in a variety of applications relating to samples containing small molecules.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 5 USPATFULL on STN  
ACCESSION NUMBER: 2006:67440 USPATFULL Full-text  
TITLE: Destructible surfactants and uses thereof  
INVENTOR(S): Bouvier, Edouard S.P, Stow, MA, UNITED STATES  
Compton, Bruce J, Lexington, MA, UNITED STATES  
Gehler, John C, Hopkinton, MA, UNITED STATES  
Gilar, Martin, Franklin, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006057659	A1	20060316
APPLICATION INFO.:	US 2003-516418	A1	20030530 (10)
	WO 2003-US16820		20030530
			20050513 PCT 371 date

	NUMBER	DATE
PATENT ASSIGNEE(S):	WATERS INVESTMENTS LIMITED, NEW CASTLE, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)	

	NUMBER	DATE
--	--------	------

PRIORITY INFORMATION: US 2002-385021P 20020531 (60)  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: EDWARDS & ANGELL, LLP, P.O. BOX 55874, BOSTON, MA, 02205, US  
 NUMBER OF CLAIMS: 70  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 13 Drawing Page(s)  
 LINE COUNT: 1376  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB The present invention provides methods for enhancing chemical reactions of molecules, e.g., biomolecules, with degradable surfactants. The chemical reactions may involve and/or be associated with analysis, e.g., solubilizing, separating, purifying and/or characterizing the molecules. In one aspect, the anionic surfactants of the present invention may be selectively broken up at relatively low pH. The resulting breakdown products of the surfactants may be removed from the molecule/sample with relative ease. The invention has applicability in a variety of analytical techniques.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 5 USPATFULL on STN  
 ACCESSION NUMBER: 76:18764 USPATFULL Full-text  
 TITLE: Dioxolane derivatives having surfactant properties  
 INVENTOR(S): McCoy, David R., Wappingers Falls, NY, United States  
 PATENT ASSIGNEE(S): Texaco Inc., New York, NY, United States (U.S. corporation)

NUMBER	KIND	DATE
US 3948953	19760406	
US 1969-847729	19690805 (4)	

PATENT INFORMATION: US 3948953 19760406  
 APPLICATION INFO.: US 1969-847729 19690805 (4)  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Gallagher, Richard J.  
 ASSISTANT EXAMINER: Turnipseed, James H.  
 LEGAL REPRESENTATIVE: Whaley, T. H., Ries, C. G.  
 NUMBER OF CLAIMS: 11  
 EXEMPLARY CLAIM: 1  
 LINE COUNT: 432

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention concerns water soluble surfactants prepared by introducing solubilizing groups such as sulfates and polyoxyalkylenes into the dioxolane condensates of aliphatic ketones with glycerol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 5 USPATFULL on STN  
 ACCESSION NUMBER: 75:51257 USPATFULL Full-text  
 TITLE: Detergent compositions containing dioxolanes as surfactants and their preparation  
 INVENTOR(S): McCoy, David Ross, Wappingers Falls, NY, United States  
 PATENT ASSIGNEE(S): Texaco Inc., New York, NY, United States (U.S. corporation)

NUMBER	KIND	DATE
--------	------	------

49

50

PATENT INFORMATION: US 3909460 19750930  
 APPLICATION INFO.: US 1973-387426 19730810 (5)  
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1969-847729, filed on 5 Aug 1969, now abandoned  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Padgett, Benjamin R.  
 ASSISTANT EXAMINER: Parr, E. Suzanne  
 LEGAL REPRESENTATIVE: Whaley, T. H., Ries, C. G., Marlowe, Bernard  
 NUMBER OF CLAIMS: 14  
 EXEMPLARY CLAIM: 1  
 LINE COUNT: 498

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention concerns water soluble surfactants prepared by introducing solubilizing groups such as sulfates and polyoxyalkylenes into the dioxolane condensates of alkyl ketones with glycerol. These surfactants are particularly useful in detergent compositions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

FILE 'MEDLINE' ENTERED AT 12:13:42 ON 04 DEC 2006

FILE 'BIOSIS' ENTERED AT 12:13:42 ON 04 DEC 2006  
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FILE CONTENT: 1961-PRESENT VOL 145 ISS 22 (20061201/ED)

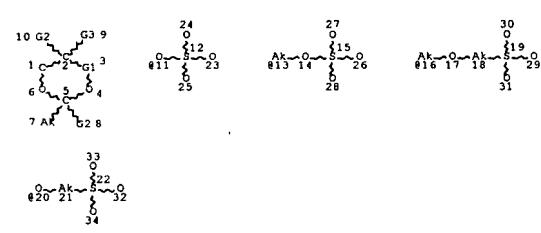
SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES  
 (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 20060234956 19 OCT 2006  
 DE 102005016345 12 OCT 2006  
 EP 1710237 11 OCT 2006  
 JP 20062026218 19 OCT 2006  
 WO 2006108879 19 OCT 2006  
 GB 2424583 04 OCT 2006  
 FR 2884252 13 OCT 2006  
 RU 2284657 10 OCT 2006  
 CA 2500558 10 SEP 2006

Expanded G-group definition display now available.

L10 STR



REF G1=(0-2) CH2  
 VAR G2=H/CH3  
 VAR G3=1/13/16/20  
 NODE ATTRIBUTES:  
 CONNECT IS X2 RC AT 1  
 DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 13 16 18 21  
 GGCAT IS LOC AT 13  
 GGCAT IS LOC AT 16  
 GGCAT IS LOC AT 18  
 GGCAT IS LOC AT 21  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:  
 ECLEVEL IS LIM ON ALL NODES  
 ALL RING(S) ARE ISOLATED

L12 55 SEA FILE=MARPAT SSS FUL L10 (MODIFIED ATTRIBUTES)  
 L13 54 SEA FILE=MARPAT ABB=ON PLU=ON L12/COMPLETE

L13 ANSWER 1 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 144:312289 MARPAT Full-text  
 TITLE: Preparation of alkyl *n*-substituted 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs via condensation of the lactone to nucleosides as potential antiviral agents  
 INVENTOR(S): Chun, Byoung-Kwon; Weng, Peiyuan  
 PATENT ASSIGNEE(S): Pharmasset, Inc., USA  
 SOURCE: PCT Int. Appl., 74 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 WO 2006031725 A2 20060323 WO 2005-US32406 20050913  
 N: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KW, KP, KR, KZ, LC, LI, LR, LS, LT, LU, LV, MA, MD, MG, MK, MM, MW, MY, NE, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GG, GW, ML, MR, NE, SN, TD, TG, BW, GH, KE, LS, MM, MZ, NA, SD, SL, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KE, MD, RU, TJ, TH

US 2006122146 A1 20060608 US 2005-225425 20050913  
 PRIORITY APPLN. INFO.: US 2004-609783P 20040914  
 US 2004-610035P 20040915  
 US 2005-666230P 20050329

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A process for preparing of 2-deoxy-2-fluoro-2-methyl-D-ribonolactones, I, wherein R1 and R2 can independently be H, CH3, acetyl, benzoyl, pivaloyl, 4-nitrobenzoyl, 3-nitrobenzoyl, 2-nitrobenzoyl, 4-chlorobenzoyl, 3-chlorobenzoyl, 2-chlorobenzoyl, 4-methylbenzoyl, 3-methylbenzoyl, 4-phenylbenzoyl, benzyl, 4-methoxybenzyl, trityl, trialkylsilyl, t-butyldialkylsilyl, t-butyldiphenylsilyl, TIPDS, THP, MOM, or MDS are prepared and used in the condensation to 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs. Thus, 2-deoxy-2-fluoro-D-ribofuranosyl pyrimidine and purine nucleoside analogs II and III, wherein X is N or CH; Y is a halogen, hydroxyl, ether, thiol, thioether, (un)substituted amine or alkyl; R1' is alkyl, vinyl, ethynyl; R2' and R3' can be same or different H, alkyl, arylalkyl, acyl, cyclic acetal such as 2',3'-O-isopropylidene or 2',3-O-benzylidene, or 2',3'-cyclic carbonate; R4, R5, and R6 are independently H, halogen, hydroxyl, ether, thiol, thioether, NJ, (un)substituted amine, (un)substituted amido, alky, halogenated alkyl, alkenyl, halogenated alkenyl, alkynyl, halogenated alkynyl, hydroxy alkyl, alkoxy are prepared and are potential anti-HCV agents. Specifically, IV was prepared in 88 % yield via condensation, alkylation and stereoselective fluorination reactions and can exhibit potential use as an anti-HCV agent.

L13 ANSWER 2 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 144:129239 MARPAT Full-text  
 TITLE: Preparation of novel C6-substituted furanoid sugar amino acids  
 INVENTOR(S): Chakraborty, Tushar Kanti; Sudhakar, Gangarajula  
 PATENT ASSIGNEE(S): India  
 SOURCE: U.S. Pat. Appl. Publ., 22 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

51

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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
 CN, CO, CR, CU, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,  
 GE, GH, GM, HR, IU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
 MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ,  
 TM, TN, TR, TT, T2, UA, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MD, SD, SL, SZ, T2, UG, KM, ZM, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GR, GU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GA, GN, GQ, GW, ML, MR,

NE, SN, TD, TG	DE 10232780	A1 20040212	DE 2002-10232780	20020718
CA 2492912	AA 20040129	CA 2003-2492912	20030717	
AU 2003250979	AL 20040209	AU 2003-250979	20030717	
EP 1525192	A2 20050427	EP 2003-765017	20030717	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SH	BR 2003012776	A 20050503	BR 2003-12776	20030717
CN 1675187	A 20050928	CN 2003-819658	20030717	
JP 2006051198	T2 20060112	JP 2004-522481	20030717	
US 2005256313	A1 20051117	US 2005-521360	20050114	

PRIORITY APPN. INFO.: DE 2002-10232780 20020718  
WO 2003-EP7766 20030717  
AB Environmentally acceptable cyclic cosurfactants (structures specified), useful for household detergents and cleaners and in body cleaning and care products, were manufactured by condensation reaction of C3-6 aldehydes with multivalent alcs., amines, thiols or carboxylic acids in the presence of acid catalysts. For example, heating a mixture of 0.55 mol ethylhexanal, 0.25 mol (HOCH2)3C6H2 and 0.25 g Amberlyst 15 for 3 h at 100°/500 mbar with removal of H2O gave a solution of 3,5-bis(1-ethylpentyl)-7-hydroxymethylidihydroazoles[3,4-c]oxazole (I) cosurfactant. A dishwashing detergent containing alkylbenzenesulfonate (Lutensol A-LBN; 50%), 30, ethoxylated (7 EO) C13-15 alcs. (Lutensol AO 7) 10, ethoxylated (3 EO) C12-14 alcs. (Lutensol C 3) and I 3% had better foam stability than similar detergent containing lauramine oxide instead of I.

L13 ANSWER 6 OF 54 MARPAT COPYRIGHT 2006 ACS on 3TN  
ACCESSION NUMBER: 140:17749 MARPAT Full-text  
TITLE: Destructible surfactants and use in small molecule  
analysis  
INVENTOR(S): Mallet, Claude; Russel, Reb J., II; Yardley, Kurt  
PATENT ASSIGNEE(S): Waters Investments Limited, USA  
SOURCE: PCT Int. Appl. 45 pp.  
DOCUMENT TYPE: CODEN: PIXKD2  
LANGUAGE: Patent  
FAMILY ACC. NUM. COUNT: English 1  
PATENT INFORMATION:

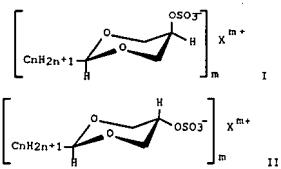
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-U916819	20030530
WO 2003102536	A3	20040902		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, FI, GL, GR, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, 2M, ZW			

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10/516418  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, EM, ZW, AM, A2,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
 NE, SN, TD, TG  
 AU 2003234681 AI 20031219 AU 2003-234681 20030530  
 AU 2006094000 AI 20060504 US 2005-516419 20050829  
 PRIORITY AFPLN. INFO.: US 2002-385018P 20020531  
 NO 2003-13616918 20030350  
 AB The anionic surfactants have a dioxolane or dioxane functional group  
 enable degradation of the surfactant under acidic conditions. Using  
 anionic surfactants in a variety of anal. applications relates to s  
 containing small mols.

L13 ANSWER 7 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 138:323055 MARPAT Full-text  
TITLE: Manufacture of novel sulfate salts of cis- and  
trans-2-alkyl-5-hydroxy-1,3-dioxanes  
INVENTOR(S): Pisacki, Andrzej; Burczyk, Bogdan; Sokolowski,  
Adam; Kotlowska, Urszula  
PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.  
SOURCE: Pol., 6 pp.  
CODEN: POXXA7  
DOCUMENT TYPE: Patent  
LANGUAGE: Polish  
FAMILY ACC. NUM. COUNT: 1  
PRIORITY DATA:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 171120	Bl	19990930	PL 1995-308929	19950602
PRIORITY APPLN. INFO.:				
S1				



AB Surface-active title salts (I and II; X = Li, K, Cs, Mg, Ca, Ba, ammonium, pyridinium; m = 1, 2; n = 7-13) were manufactured by reacting the parent *cis*-and/or *trans*-2-(C<sub>7</sub>-13-alkyl)-5-hydroxy-1,3-dioxanes with ClSO<sub>3</sub>H in CC<sub>14</sub> in the presence of pyridine, or with SO<sub>3</sub>/pyridine complex, then removing the solvent and neutralizing the residue with aqueous alc. solution or suspension of alkali metal or alkaline earth metal hydroxide, carbonate or bicarbonate, or NH<sub>4</sub>OH. For example, adding 0.0464 mol of SO<sub>3</sub>/pyridine complex at ambient temperature in portions to a stirred solution of 0.0387 mol of a mixture of

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 was refluxed for etherification with azeotropic removal of water for 16 h to give 97.9 g III (R1 = R3 = Et, R2 = R4 = Me). The latter compound (60 g) was treated with *p*-toluenesulfonic acid and 3-5% steam per h was introduced with removing excess steam and Me Et ketone outside the system for 5 h and the resulting mixture was dehydrated at 90° and 6.66 kPa for 0.5 to give 41.0 g diisobutyrin (97.9% purity).

L13 ANSWER 9 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 134:2339 MARPAT Full-text  
TITLE: Destructible surfactants and uses thereof  
INVENTOR(S): Lee, Peter Jeng Jong; Compton, Bruce J.  
PATENT ASSIGNEE(S): Water Investments Ltd., USA  
SOURCE: PCT Int. Appl., 50 PP.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000070334	A1	20001123	WO 2000-US13028	20000512
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KE, LC, LL, LS, LT, LV, MD, MG, MK, MN, MW, MO, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, L9, MW, SD, SL, SS, TZ, UG, ZW, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000048435	A5	20001205	AU 2000-48435	20000512
EP 1181537	A1	20020227	EP 2000-930651	20000512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRIORITY APPLN. INFO.:			US 1999-134113P	19990514

WO 2000-0513028 20000512  
AB **Destructible surfactants and methods of using same are provided. The invention includes anionic surfactants having a dioxolane or dioxane functional group which enables the surfactant to be broken down under acidic conditions. The invention also includes methods of making anionic surfactants and methods of using anionic surfactants in a variety of applications.**

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L13 ANSWER 10 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 133-281687 MARPAT Full-text  
TITLE: Preparation of 3,4-dihydroxybutanoic acid and  
3-hydroxybutyrolactone  
INVENTOR(S): Hollingsworth, Rawle I.  
PATENT ASSIGNEE(S): Michigan State University, USA  
SOURCE: PCT Int. Appl., 37 pp.  
DOCUMENT TYPE: Coden: PIXXD2  
LANGUAGE: Patent  
FAMILY ACC. NUM. COUNT: English 1  
PATENT INFORMATION:

www.illustration.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058256	A1	20001105	WO 2000-084156	20000217
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KE, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, EW, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6235930	AA	20010522	US 1999-282779	19990331
CA 2360864	AA	20001105	CA 2000-2360864	20000217
EP 1173400	AI	20020123	EP 2000-908716	20000217
EP 1173400	BI	20060802		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
JP 2002540182	T2	20021126	JP 2000-607962	20000217
AT 334958	E	20060815	AT 2000-908716	20000217
US 6288244	BI	20010911	US 2000-666346	20000921
PRIORITY APPLN. INFO.:			US 1999-282779	19990331
			WO 2000-084156	20000217

AB Title compds. were prepared by treating a tris(leaving group-substituted)pentone with peroxide in the presence of a base. Thus, 3,4-O-methyl-L-arabinose was treated with H2O2/H2O and the product heated with H2SO4 to give 95% (R)-3-hydroxy- $\gamma$ -butyrolactone of >99.8% optical purity.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L13 ANSWER 11 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 131:163454 MARPAT Full-text

TITLE: Liquid crystal device and liquid crystal display device

INVENTOR(S): Sato, Koichi; Hanii, Yukio; Takiguchi, Takao;

Nakamura, Shinichi; Noguchi, Koji; Shimizu, Yasushi

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 49 pp.

CODEN: JKKXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11217568	A2	19990810	JP 1998-33523	19980202

PRIORITY APPLN. INFO.: JP 1998-33523 19980202

AB The device contains a pair of substrates sandwiching a liquid crystal composition, in which one of the substrate has a uniaxially oriented film coated with a dimer liquid crystal compound-based layer. The display device contains the former device and its driving apparatus. The display device may contain a chiral-smectic liquid crystal. The display device shows improved driving margin.

L13 ANSWER 12 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 131:80859 MARPAT Full-text

TITLE: Liquid crystal display device having polyimide

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DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11142855	A2	19990526	JP 1997-316663	19971104

PRIORITY APPLN. INFO.: JP 1997-316663 19971104

AB The liquid crystal device contains a transparent electrode-containing pair of substrates sandwiching a liquid crystal composition with dielec. anisotropy (A<sub>11</sub>) and an interface layer containing a liquid crystal compound with dielec. anisotropy (A<sub>22</sub>)  $\geq$  (A<sub>11</sub> + 1). The display device contains the liquid crystal device and its driving apparatus. The manufacture method involves forming the layer, adhering two substrates having the substrates to a liquid crystal cell, and feeding the composition into the cell. The liquid crystal device shows improved switching property. A smectic liquid crystal may be useful for the device.

L13 ANSWER 14 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 130:318664 MARPAT Full-text

TITLE: Method for liquid crystal alignment for electrooptical display device

INVENTOR(S): Aoki, Yasushi; Terada, Tadahiro; Sato, Koichi;

Noguchi, Koji; Hanii, Yukio

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 42 pp.

CODEN: JKKXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11100577	A2	19990413	JP 1998-209028	19980724

PRIORITY APPLN. INFO.: US 6083574 A 20000704 US 1998-123330 19980728

AB For an electrooptical display device comprising a smectic liquid crystal layer enclosed between a pair of electrode-containing substrates in which the liquid crystal layer has a temperature range in which the interlayer spacing of the smectic A phase increases as the temperature of the liquid crystal layer is reduced, the alignment of the liquid crystal layer is achieved by lowering the temperature of the liquid crystal layer to a specified temperature after repeatedly elevating and lowering the liquid crystal layer within the above temperature range.

L13 ANSWER 15 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 130:311801 MARPAT Full-text

TITLE: Preparation of novel sodium sulfates of 1,3-dioxane derivatives

INVENTOR(S): Piatecki, Andrzej; Burczyk, Bogdan; Sokolowski,

Adam; Kotlowska, Urszula

PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.

SOURCE: Pol. 4 pp.

CODEN: FOXXA7

DOCUMENT TYPE: Patent

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058256	A1	20001105	WO 2000-084156	20000217
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KE, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, EW, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6235930	AA	20010522	US 1999-282779	19990331
CA 2360864	AA	20001105	CA 2000-2360864	20000217
EP 1173400	AI	20020123	EP 2000-908716	20000217
EP 1173400	BI	20060802		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
JP 2002540182	T2	20021126	JP 2000-607962	20000217
AT 334958	E	20060815	AT 2000-908716	20000217
US 6288244	BI	20010911	US 2000-666346	20000921
PRIORITY APPLN. INFO.:			US 1999-282779	19990331
			WO 2000-084156	20000217

AB The title compds. were prepared by treating a tris(leaving group-substituted)pentone with peroxide in the presence of a base. Thus, 3,4-O-methyl-L-arabinose was treated with H2O2/H2O and the product heated with H2SO4 to give 95% (R)-3-hydroxy- $\gamma$ -butyrolactone of >99.8% optical purity.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L13 ANSWER 17 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:215957 MARPAT Full-text  
 TITLE: Liquid-crystal device with reduced DC offset potential and liquid-crystal display apparatus  
 INVENTOR(S): Sato, Kimikazu; Nakamura, Shinichi; Takashi, Etsuo; Hanyu, Yukio; Noguchi, Koji; Mori, Yoshimasa; Yamada, Shuji  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP-11052433 A2 19990226 JP 1997-216955 19970729  
 JP 1997-216955 19970729  
 PRIORITY APPLN. INFO.: AB The device has a pair of substrates sandwiching a liquid-crystal composition, in which charge amts. of ions in the composition after elec.-field application from a 1st substrate to a 2nd substrate has the different absolute value from that of the ions after elec.-field application from the 2nd substrate to the 1st substrate. The apparatus has the device and its driving apparatus. The substrates should be coated with electrodes containing a nonionic surfactant. The device shows reduced DC offset potential and stable threshold value.

L13 ANSWER 18 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:215956 MARPAT Full-text  
 TITLE: Orientation method of liquid crystal, manufacture of liquid-crystal device, and liquid-crystal display apparatus  
 INVENTOR(S): Nakamura, Shinichi; Hanyu, Yukio; Sato, Kimikazu; Takiguchi, Taka; Noguchi, Koji; Shimizu, Yasushi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 11052385 A2 19990226 JP 1997-220244 19970731  
 JP 3096902 B2 20001010  
 PRIORITY APPLN. INFO.: JP 1997-220244 19970731  
 AB The device comprises a pair of electrode substrates sandwiching a chiral-smectic phase-containing liquid crystal. In the method, the crystal is subjected to at least one cycle of heat and cool treatment in a chiral-smectic-phase temperature range. A liquid-crystal display apparatus containing the device and its driving apparatus is also claimed. The device shows excellent orientation and large driving margin. The apparatus gives good images with excellent imaging property.

L13 ANSWER 19 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

10/516418  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP-11052382 A2 19990226 JP 1997-216953 19970729  
 JP 1997-216953 19970729  
 PRIORITY APPLN. INFO.: AB The device has a liquid-crystal composition sandwiched by a pair of substrates, in which one of the substrate has a 1st orientation-controlling film which is conducted uniaxial orientation treatment and the other substrate has a 2nd orientation-controlling film which is not conducted the treatment. In the device, the 1st film has neutral and/or ionic mols. on its surface. The device is manufactured by treating the 2nd substrate with the mols. and injecting a liquid crystal into the substrate. A liquid-crystal apparatus equipped with the device and its driving apparatus is also claimed. The device shows stable threshold value and improved electrooptical switching property. The device gives good images with high quality.

L13 ANSWER 22 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:203212 MARPAT Full-text  
 TITLE: Liquid crystal device containing hydrophilic layer and its manufacture  
 INVENTOR(S): Maruyama, Tomoko; Aoki, Kyoshi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP-11043674 A2 19990216 JP 1997-216954 19970729  
 JP 1997-216954 19970729  
 PRIORITY APPLN. INFO.: AB The device contains a liquid-crystal composition whose both sides are successively coated with water-containing hydrophilic layers containing H2O and a substance (not H2O) and electrodes. The manufacture method involves applying a substrate with the substance and moisturizing the substance. A liquid-crystal display device containing the device and its driving apparatus is also claimed. The device shows good switching property. The display device gives good images with high reliability and excellent reproducitvity.

L13 ANSWER 23 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:203029 MARPAT Full-text  
 TITLE: Liquid crystal element containing optically active compound, its manufacture, and the liquid crystal device  
 INVENTOR(S): Maruyama, Tomoko; Tsuzuki, hideku; Sato, Koichi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent

10/516418  
 ACCESSION NUMBER: 130:215955 MARPAT Full-text  
 TITLE: Orientation method of liquid crystal, manufacture of liquid-crystal device, and liquid-crystal display apparatus  
 INVENTOR(S): Noguchi, Koji; Takiguchi, Takao; Sato, Koichi; Nakamura, Shinichi; Shimizu, Yasushi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 11052384 A2 19990226 JP 1997-220237 19970731  
 JP 3062997 B2 20000712  
 PRIORITY APPLN. INFO.: JP 1997-220237 19970731  
 AB The device comprises a pair of electrode substrates sandwiching a chiral-smectic phase-containing liquid crystal. The method involves keeping the crystal for 210 h at controlled temperature in a chiral-smectic-phase temperature range. A liquid-crystal display apparatus containing the device and its driving apparatus is also claimed. The device shows excellent orientation and large driving margin. The apparatus gives good images with excellent imaging property.

L13 ANSWER 20 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:215954 MARPAT Full-text  
 TITLE: Liquid-crystal device containing cationic surfactant and liquid-crystal apparatus  
 INVENTOR(S): Noguchi, Koji; Hanyu, Yukio; Sato, Kimikazu; Nakamura, Shinichi; Mori, Yoshimasa; Yamada, Shuji; Terada, Tadahiro  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 11052383 A2 19990226 JP 1997-216956 19970729  
 PRIORITY APPLN. INFO.: JP 1997-216956 19970729  
 AB The device has a liquid-crystal composition sandwiched by a pair of substrates, in which one of the substrate has an orientation-controlling film containing a cationic surfactant. A liquid-crystal display apparatus containing the device and its driving apparatus is also claimed. The device is useful for a chiral-smectic liquid-crystal imaging apparatus. The apparatus shows large driving margin.

L13 ANSWER 21 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:215953 MARPAT Full-text  
 TITLE: Liquid-crystal device having orientation-controlling film and its manufacture  
 INVENTOR(S): Maruyama, Tomoko; Nakazawa, Ikuo; Terada, Tadahiro  
 66

10/516418  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 11052323 A2 19990226 JP 1997-216961 19970729  
 PRIORITY APPLN. INFO.: JP 1997-216961 19970729  
 AB In the element comprising a liquid crystal composition sandwiched between a pair of substrates, the composition contains optically active compds., 21 component of which is localized near to the interface between the substrate and the composition. The element is manufactured by coating or scattering process of the optically active compds. on the substrate. The device having the element and a means for processing the element is also claimed. The element shows high switching speed without change of the speed after long-term use.

L13 ANSWER 24 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:169485 MARPAT Full-text  
 TITLE: Liquid-crystal device containing anionic surfactant and liquid-crystal apparatus  
 INVENTOR(S): Aoki, Yesushi; Terada, Tadahiro; Sato, Koichi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 11052388 A2 19990226 JP 1997-216958 19970729  
 PRIORITY APPLN. INFO.: JP 1997-216958 19970729  
 AB The device has a liquid-crystal composition sandwiched by a pair of substrates, in which one of the substrate has an orientation-controlling film containing an anionic surfactant. A liquid-crystal display apparatus containing the device and its driving apparatus is also claimed. The device is useful for a chiral-smectic liquid-crystal imaging apparatus. The apparatus shows large driving margin and high contrast.

L13 ANSWER 25 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 130:175383 MARPAT Full-text  
 TITLE: Liquid-crystal device containing surfactant and inorganic alkali salt and liquid-crystal apparatus  
 INVENTOR(S): Sato, Koichi; Hanyu, Yukio; Yamada, Shuji; Noguchi, Koji; Nakamura, Shinichi; Mori, Yoshimasa; Terada, Tadahiro; Shimizu, Yesushi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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The device is useful for a chiral-smectic liquid-crystal imaging apparatus  
The apparatus shows large driving margin and high contrast.

L13 ANSWER 28 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 130:175382 MARPAT Full-text  
TITLE: Liquid-crystal device containing polymer  
surfactant and liquid-crystal apparatus  
INVENTOR(S): Sato, Kimikazu; Hanyu, Yukio; Nakamura, Shinichi;  
Mori, Yoshimasa; Yamada, Shuji; Noguchi, Koji;  
Terada, Tadahiro; Aoki, Yasufumi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 54 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11014992	A2	19990122	JP 1997-164738	19970620
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PRIORITY APPLN. INFO.: JP 1997-164738 19970620  
AB In the liquid crystal element comprising a liquid crystal sandwiched between a pair of substrates 21 of which has uniaxial orientation property, 21 of the substrate has a film with volume resistivity  $1 + 105-1 + 1010 \Omega\text{-cm}$  comprising conductive particles dispersed in an insulating material. The conductive particles have particle size 5-10 nm and form aggregates with minor axis 5-300 nm. The element shows high contrast and luminance and suitable for high-speed driving.

L13 ANSWER 29 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 130:103025 MARPAT Full-text  
TITLE: Liquid crystal element using substrate having  
impedance-controlled layer  
INVENTOR(S): Gofuku, Ichiro; Ito, Yasuhiro; Takashi, Etsuo;  
Terada, Tadahiro  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11014998	A2	19990122	JP 1997-164663	19970620
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PRIORITY APPLN. INFO.: JP 1997-164663 19970620  
AB In the liquid crystal element comprising a liquid crystal sandwiched between a pair of substrates 21 of which has uniaxial orientation property, 21 of the substrate has an electrode and a layer having different elec. properties from that of the electrode and the impedance observed by applying voltage between the electrode and the layer satisfies  $Z \leq \pi/(d_1 \cdot d_2)$  [Z = ratio of the impedance observed by applying voltage in one direction and that by applying voltage in the other direction;  $\pi$  = dielec. constant of the liquid crystal;  $t$  = basic pulse interval on driving the liquid crystal element;  $d_1$  = volume resistivity of the layer;  $d_2$  = thickness of the layer;  $d_1$  = thickness of the liquid crystal layer]. The element has low hysteresis and burning is prevented.

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L13 ANSWER 30 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 130:89254 MARPAT Full-text  
TITLE: Chiral smectic liquid crystal device and display  
INVENTOR(S): Shimizu, Yasushi; Nakazawa, Ikuo; Terada, Tadahiro  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10301116	A2	19980113	JP 1997-111493	19970428
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PRIORITY APPLN. INFO.: JP 1997-111493 19970428  
AB The liquid crystal element comprises a chiral smectic liquid crystal, the pair of substrates interposing the liquid crystal, an orientation film formed on at least one of the substrates, and an island-shape metal layer which is formed on at least one of the orientation film to reduce polar component of the surface energy. The island-shape layer may be made from Au, Ag, Pd, or Cu. The liquid crystal containing F does not show the cholesteric phase when temperature decreases.

L13 ANSWER 33 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 129:323916 MARPAT Full-text  
TITLE: Liquid crystal element and liquid crystal display  
device using it  
INVENTOR(S): Kurematsu, Katsumi; Terada, Tadahiro; Ito, Yasuhiro  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10288786	A2	19981027	JP 1997-97634	19970415
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PRIORITY APPLN. INFO.: JP 1997-97634 19970415  
AB In the element having plural pixels and liquid crystals sandwiched between a pair of substrates, one of which has active elements corresponding to pixels, the surface of the substrate is coated with an orientation-controlling layer without uniaxial orientation treatment. The surface of the other substrate which has no active element is coated with the layer with uniaxial orientation treatment. The active elements may be thin film transistors. The liquid crystal may be a chiral smectic composition containing a F-containing compound. Liquid crystal display device comprising the element, driving means, and a color backlight emitting 3 primary colors is also claimed. The element has less orientation defect and shows high contrast without generation of burning and fluctuation.

L13 ANSWER 34 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 129:195873 MARPAT Full-text  
TITLE: Chiral smectic C liquid crystal cell including  
compound interacting with cation and displays  
therefrom  
INVENTOR(S): Yamada, Shuji; Noguchi, Koji; Nakamura, Shinichi;  
Sato, Kimikazu; Shinjo, Kenshi; Mori, Yoshimasa;

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PATENT ASSIGNEE(S): Haniu, Yukio  
Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10195439 A2 19980728 JP 1996-358522 19961229  
PRIORITY APPLN. INFO.: JP 1996-358522 19961229  
AB The cell includes a chiral smectic liquid crystal composition having 22 stable phases and containing a compound which interacts with cations. The composition satisfies  $0.990 \leq d_{min}/d_A$  wherein  $d_A$  represents an interlayer distance at the first transition point where the interlayer distance starts decreasing around the transition temperature of  $SmA \rightarrow SmC^*$ , and  $d_{min}$  represents the min. interlayer distance at the second transition point from which the distance will increase. The compound interacting with cations may be a compound containing an organic anion, an anionic surfactant, or a nonionic surfactant. The liquid crystal composition may contain a (latent) smectic liquid crystal compound wherein a fluorocarbon terminal and a hydrocarbon terminal are connected to each other via a core. The local switching error in the LCD is prevented.

L13 ANSWER 35 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 129:195871 MARPAT Full-text  
TITLE: Chiral smectic liquid crystal cell without switching error and display therefrom  
INVENTOR(S): Odera, Yasuto; Asao, Kyoshi; Mizutani, Hidemasa  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 54 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10195442 A2 19980728 JP 1996-358526 19961229  
PRIORITY APPLN. INFO.: JP 1996-358526 19961229  
AB The cell includes a chiral smectic liquid crystal composition having 22 stable phases and containing a compound which adsorbs polar substance. The composition satisfies  $0.990 \leq d_{min}/d_A$  wherein  $d_A$  represents the interlayer distance at a 1st transition point from where the interlayer distance begins to decrease around the  $SmA \rightarrow SmC^*$  transition temperature, and  $d_{min}$  represents the min. interlayer distance at the 2nd transition point from where the interlayer distance starts to increase. The adsorbent for polar substances may be a micropowd. inorg. oxide such as Al2O3 or SiO2. The liquid crystal composition may contain a (latent) smectic liquid crystal compound wherein a fluorocarbon terminal and a hydrocarbon terminal are connected to each other via a (Ph pyrimidine) core. A display device containing the composition is also claimed.

L13 ANSWER 36 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

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ACCESSION NUMBER: 129:195870 MARPAT Full-text  
TITLE: Chiral smectic C liquid crystal cell including compound interacting with anion and displays therefrom  
INVENTOR(S): Yamada, Shuji; Noguchi, Koji; Sato, Kimizuka; Nakamura, Shinichi; Shinjo, Kenshi; Mori, Yoshimasa; Haneo, Yukio  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10195438 A2 19980728 JP 1996-358521 19961229  
PRIORITY APPLN. INFO.: JP 1996-358521 19961229  
AB The cell includes a chiral smectic liquid crystal composition having 22 stable phases and containing a compound which interacts with anions. The composition satisfies  $0.990 \leq d_{min}/d_A$  wherein  $d_A$  represents the interlayer distance at a 1st transition point where the interlayer distance begins to decrease around the  $SmA \rightarrow SmC^*$  transition temperature, and  $d_{min}$  represents the min. interlayer distance at a 2nd transition point from where the interlayer distance starts to increase. The compound interacting with anions may be a compound containing an organic cation, a cationic surfactant, an amphoteric surfactant, or an non-liquid-crystalline amine. The liquid crystal composition may contain a (latent) smectic liquid crystal compound wherein a fluorocarbon terminal and a hydrocarbon terminal are connected to each other via a (Ph pyrimidine) core. A display device containing the composition is also claimed. The local switching error in the LCD is prevented.

L13 ANSWER 37 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 129:129116 MARPAT Full-text  
TITLE: Liquid-crystal device with improved bistability and its manufacture  
INVENTOR(S): Asaoka, Masanobu; Terada, Tadahiro; Nakazawa, Ikuo; Gofuku, Ichiro; Ito, Yasuhiro  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10177164 A2 19980630 JP 1996-353784 19961218  
PRIORITY APPLN. INFO.: JP 1996-353784 19961218  
AB In manufacture of the device, substrates before and after monochroically orientation treatment are treated with a solvent while sonication and heated. The obtained device comprises a chiral smectic liquid-crystal composition containing a P-containing compound, having a (latent) smectic intermediate phase, containing a fluorocarbon terminal part and a hydrocarbon terminal part. The device showed good bistability and stable optical response characteristics.

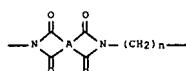
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L13 ANSWER 38 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 128:302166 MARPAT Full-text  
TITLE: Liquid crystal element and its manufacture  
INVENTOR(S): Kami, Yutaka; Tokunaga, Hiroyuki; Tada, Naonori; Tomono, Haruo; Matsuo, Yuji; Tsuboyama, Akira; Takeo, Hidemaki; Tsuzuki, Hidetoshi; Sato, Koichi; Inaba, Yutaka  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10082984 A2 19980331 JP 1997-178049 19970618  
US 6154265 A 20001126 US 1997-078113 19970618  
PRIORITY APPLN. INFO.: JP 1996-178437 19960618  
AB The title liquid crystal element has thick auxiliary electrodes placed closer to transparent substrate than the main electrodes for assuring the smoothness of the orientation film and preventing the retard of the voltage wave. The liquid crystal composition contains a fluoro compound having a fluorocarbon terminal group and hydrocarbon terminal group and showing a smectic intermediate phase or a potential smectic intermediate phase.

L13 ANSWER 39 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 128:237278 MARPAT Full-text  
TITLE: Chiral smectic liquid crystal element having polyimide orientation control film  
INVENTOR(S): Asaoka, Masanobu; Nakazawa, Ikuo; Terada, Tadahiro; Takeo, Hidemaki; Nakamura, Shinichi; Sato, Kimiichi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

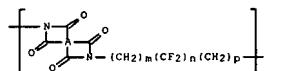
PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10039313 A2 19980213 JP 1996-192204 19960722  
JP 3192593 B2 20010730  
US 6001276 A 19991214 US 1997-896541 19970718  
EP 821048 A2 19980128 EP 1997-305436 19970721  
EP 821048 A3 19981028  
EP 821048 B1 20011031  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, FI  
PRIORITY APPLN. INFO.: JP 1996-192204 19960722  
GI



AB The liquid crystal element comprises a chiral smectic liquid crystal component containing a fluorocarbon end group, and a polyimide orientation control film having repeating unit structure I:  $A = 4$  valent aliphatic hydrocarbon;  $n = 1-8$ . The liquid crystal element provides high contrast, rapid response, high resolution, and high contrast.

L13 ANSWER 40 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 128:223934 MARPAT Full-text  
TITLE: Liquid crystal element and display  
INVENTOR(S): Nakazawa, Ikuo; Terada, Tadahiro; Asaoka, Masanobu  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
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JP 10045908 A2 19980217 JP 1996-216980 19960731  
PRIORITY APPLN. INFO.: JP 1996-216980 19960731  
GI



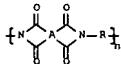
AB The liquid crystal element has a liquid crystal layer between a pair of electrode- and orientation film-bearing substrates, wherein at least 1 orientation film is made of a polyimide of I ( $A =$  tetravalent aliphatic or aromatic hydrocarbon group;  $m, p = 1-3; n = 1-8$ ). The liquid crystal layer is made of a chiral smectic liquid crystal composition

L13 ANSWER 41 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 128:109669 MARPAT Full-text  
TITLE: Liquid-crystal device having polyimide layer and display with high driving stability using it  
INVENTOR(S): Nakazawa, Ikuo; Terada, Tadahiro; Asaoka, Masanobu; Shimizu, Yasushi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.

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DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 10046635 A2 19980220 JP 1996-216981 19960731  
PRIORITY APPLN. INFO.: JP 1996-216981 19960731  
GI



AB The device has a layer of polyimide having a structural repeating unit I (A = 4-valent aliphatic or aromatic hydrocarbyl; R = OH-substituted C2-8 n-alkylene) on 21 substrate. Preferably, the polyimide layer is an orientation-controlling layer. The device is useful as a light valve for flat panel displays, projection displays, and printers. The display using the device is also claimed. The displays shows less deterioration in driving margin, good orientation, and durability.

L13 ANSWER 42 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 128:193476 MARPAT Full-text  
TITLE: Liquid crystal components and display devices  
INVENTOR(S): Nakazawa, Ikuo; Terada, Tadahiro; Asaoka, Masanobu; Shimizu, Yasushi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 10045909 A2 19980217 JP 1996-216982 19960731  
PRIORITY APPLN. INFO.: JP 1996-216982 19960731  
AB Liquid crystal elements having reduced margin degradation due to afterimage and good driving stability and durability comprise fluorine-containing chiral smectic liquid crystal layer and a pair of substrate boards having an electrode and an polyimide orientation-control layer. The polyimides for the orientation-control layer are prepared from aliphatic or aromatic tetracarboxylic dianhydrides and diaminooxyalkylenes. The fluorine-containing chiral smectic liquid crystalline compds. are characterized by having a fluorocarbon terminal and a hydrocarbon terminal.

L13 ANSWER 43 OF 54 MARPAT COPYRIGHT 2006 ACS on STN

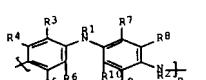
10/516418  
suppresses the opposing elec. field effects and the display element shows the excellent switching properties.

L13 ANSWER 45 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 127:255439 MARPAT Full-text  
TITLE: Liquid-crystal device and display having poly(bipyridine) orientation film  
INVENTOR(S): Nakazawa, Ikuo; Ito, Yasuhiro; Hanyu, Yukio; Terada, Masahiro  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 09211464 A2 19970815 JP 1996-34223 19960130  
PRIORITY APPLN. INFO.: JP 1996-34223 19960130  
AB The liquid-crystal device contains a poly(2,2'-bipyridine-5,5'-diyl) film as a cell unit. The display using the device is also claimed. Adhesion of the orientation film was improved and the device showed high contrast and luminance.

L13 ANSWER 46 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 127:154763 MARPAT Full-text  
TITLE: Liquid crystal displays including chiral smectic liquid crystals and unidirectionally oriented polyaniline films  
INVENTOR(S): Nakazawa, Ikuo; Hanyu, Yukio; Asao, Yasushi; Ito, Yasuhiro; Asaoka, Masanobu; Takeda, Yasuaki; Moriyama, Takashi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 09160045 A2 19970620 JP 1995-346303 19951213  
PRIORITY APPLN. INFO.: JP 1995-346303 19951213  
GI



ACCESSION NUMBER: 127:301350 MARPAT Full-text  
TITLE: Liquid crystal device, its manufacture and liquid crystal apparatus  
INVENTOR(S): Hanyu, Yukio; Asaoka, Masanobu; Terada, Masahiro; Nakazawa, Ikuo; Yamada, Nobutsugu; Sato, Koichi; Shinjo, Kenji; Mori, Yoshimasa; Noguchi, Koji; Nakamura, Shinichi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 09236806 A2 19970909 JP 1997-356 19970106  
JP 3295801 B2 20020624 US 5885482 A 19990323 US 1996-775792 19961227  
PRIORITY APPLN. INFO.: JP 1995-352162 19951228 JP 1995-352261 19951228

AB In the title device including a substrate containing an uniaxially rubbed orientation layer, a substrate containing a non-rubbed orientation layer, and spacers interposed between the above substrates, the spacers are surface-treated with the material which constitutes the non-rubbed orientation layer. The spacers may be silica beads or heat-curable epoxy resin. The uniaxially rubbed orientation layer may be made up of polyamides (Markush structure given), the non-rubbed orientation layer may contain a silane coupling agent, F-containing polymer, silicone polymer, binder, and/or conductive microparticles. The liquid crystals of the device may be F-containing end group-containing chiral smectic liquid crystals (Markush structure given). The device shows excellent switching properties.

L13 ANSWER 44 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 127:265992 MARPAT Full-text  
TITLE: Liquid crystal display element having book-shelf type structure  
INVENTOR(S): Ito, Yasuhiro; Moriyama, Takashi; Asao, Yasushi; Hanyu, Yukio  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 09222606 A2 19970826 JP 1996-333477 19961213  
JP 3218426 B2 20011015

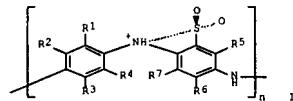
PRIORITY APPLN. INFO.: JP 1995-346310 19951213  
AB The liquid crystal element comprises a chiral smectic liquid crystal component between a pair of substrates, wherein an orientation controlling film locates on a side of the substrate facing the liquid crystal and consists of an amide polymer and polypyridine. The composition of the orientation control film

10/516418  
AB The title displays, showing defect-free orientation and sharp threshold-voltage characteristics, include pair of electrodes sandwiching chiral smectic liquid crystals via films of polyaniline derivative having repeating unit I (R1= H, Cl-6 alkyl (oxy); R1 and/or R2 is alkyl (oxy) when all substituents for R3-10 are H). The polyaniline derivative films may be rubbed and work as unidirectionally oriented alignment films. The liquid crystals may include compds. having 2 end chains of fluorocarbons and hydrocarbons bonded via center cores (of phenylpyrimidines).

L13 ANSWER 47 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 127:142919 MARPAT Full-text  
TITLE: Liquid-crystal display element having polyaniline film  
INVENTOR(S): Nakazawa, Ikuo; Hanyu, Yukio; Asao, Yasushi; Asaoka, Masanobu; Ito, Yasuhiro; Moriyama, Takashi; Takeda, Yasuaki  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
JP 09160047 A2 19970620 JP 1995-346304 19951213  
PRIORITY APPLN. INFO.: JP 1995-346304 19951213  
GI



AB The device has a polyaniline derivative film having a structural repeating unit I (R1-7 = H, Cl-6 alkyl, alkoxy). The device showed good temperature characteristics of driving margin and gave high-contrast images.

L13 ANSWER 48 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 127:128792 MARPAT Full-text  
TITLE: Liquid crystal displays including chiral smectic liquid crystals and Langmuir-Blodgett films  
INVENTOR(S): Hanyu, Yukio; Takeda, Yasuaki; Moriyama, Takashi; Ito, Yasuhiro; Nakazawa, Ikuo; Asaoka, Masanobu; Asao, Yasushi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 09160044 A2 19970620 JP 1995-346311 19951213  
 PRIORITY APPLN. INFO.: JP 1995-346311 19951213  
 AB The displays, showing good switching property, include pair of electrodes sandwiching chiral smectic liquid crystals via oriented elec.-conductive base films and 55- $\mu$ m-thickness alignment films preferably of Langmuir-Blodgett (LB) films. The liquid crystals may include compds. having 2 end chains of fluorocarbons and hydrocarbons bonded via center cores (preferably of phenylpyrimidine).

L13 ANSWER 49 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 127:128772 MARPAT Full-text  
 TITLE: Liquid crystal element and liquid crystal device  
 INVENTOR(S): Asaka, Masanobu; Gofuku, Ichiro; Ito, Yasuhiro; Nakazawa, Ikuo; Terada, Masahiro  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 JP 09152611 A2 19970610 JP 1995-334279 19951130  
 PRIORITY APPLN. INFO.: JP 1995-334279 19951130  
 AB In the title liquid crystal element comprising two substrates and a chiral smectic liquid crystal composition (which has no cholesteric phase) in the space between the two substrates, the first substrate has an orientation film which has been subjected to rubbing treatment, the second substrate has a film comprising 2 or more binder materials; at least one of said binder materials occupies 3 to 30 weight% of the total amount of all binder materials and is present in larger concentration on the surface contacting the liquid crystals than on other parts. The title element contains phenylpyrimidine liquid crystals having fluorinated hydrocarbon chains (Markush structure given). The title element shows high contrast.

L13 ANSWER 50 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 126:13050 MARPAT Full-text  
 TITLE: Electrophotographic migration imaging member  
 INVENTOR(S): Malhotra, Shadi L.; Chen, Ligun; Perron, Marie-Eve  
 PATENT ASSIGNEE(S): Xerox Corp., USA  
 SOURCE: U.S., 144 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

US 5563014 A 19961008 US 1995-442227 19950515  
 CA 2170298 AA 19961116 CA 1995-2170298 19960226  
 CA 2170299 C 2001002  
 JP 08314241 A2 19961129 JP 1995-113457 19960508  
 BR 9602246 A 19980113 BR 1995-2246 19960514  
 PRIORITY APPLN. INFO.: US 1995-442227 19950515

AB Disclosed is a migration imaging member comprising (a) a substrate, (b) a softenable layer comprising a softenable material and a photosensitive migration marking material, and (c) a transparentizing agent which transparentizes the migration marking material in contact therewith in at least one layer of the migration imaging member. Also disclosed is a process which comprises (1) providing a migration imaging member comprising (a) a substrate, (b) a softenable layer comprising a softenable material and a photosensitive migration marking material, and (c) a transparentizing agent which transparentizes the migration marking material in contact therewith in at least one layer of the migration imaging member, (2) uniformly charging the imaging member, (3) exposing the charged imaging member to an activating radiation at a wavelength to which the migration marking material is sensitive, and (4) causing the softenable material to soften and enabling a first portion of the migration marking material to migrate through the softenable material toward the substrate in an imagewise pattern while a second portion of the migration marking material remains substantially unmigrated within the softenable layer, wherein subsequent to migration of the first portion of migration marking material, either (a) the first portion of migration marking material contacts the transparentizing agent and the second portion of migration marking material does not contact the transparentizing agent or (b) the second portion of migration marking material contacts the transparentizing agent and the first portion of migration marking material does not contact the transparentizing agent.

L13 ANSWER 51 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 125:127644 MARPAT Full-text  
 TITLE: Method for obtaining improved image contrast in migration imaging members  
 INVENTOR(S): Limburg, William W.; Mammino, Joseph; Liebermann, George; Griffiths, Clifford H.; Shahin, Michael M.; Malhotra, Shadi L.; Chen, Ligun; Perron, Marie-Eve  
 PATENT ASSIGNEE(S): Xerox Corp., USA  
 SOURCE: U.S., 147 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

US 5514505 A 19960507 US 1995-441360 19950515  
 CA 2169980 AA 19961116 CA 1995-2169980 19960221  
 CA 2169980 C 20010424  
 JP 08314240 A2 19961129 JP 1995-113456 19960508  
 EP 743573 A2 19961120 EP 1996-303359 19960514  
 EP 743573 A3 19970305  
 EP 743573 B1 20000906  
 R: DE, FR, GB

PRIORITY APPLN. INFO.: US 1995-441360 19950515

AB Disclosed is a process which comprises (a) providing a migration imaging member comprising (1) a substrate and (2) a softenable layer comprising a softenable material and a photosensitive migration marking material present in the softenable layer as a monolayer of particles situated at or near the surface of the softenable layer spaced from the substrate, (b) uniformly charging the imaging member, (c) imagewise exposing the charged imaging member to activating radiation at a wavelength to which the migration marking material is sensitive, (d) causing the softenable material to soften and enabling a first portion of the migration marking material to migrate through the softenable material toward the substrate in an imagewise pattern while a second portion of the migration marking material remains substantially unmigrated within the softenable layer, and (e) contacting the second portion of the migration marking material with a transparentizing agent which transparentizes the migration marking material.

L13 ANSWER 52 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 123:127796 MARPAT Full-text  
 TITLE: Liquid crystal compounds having a fluoroether terminal portion  
 INVENTOR(S): Janulis, Eugene P.; Johnson, Gilbert C.; Radcliffe, Marc D.; Savu, Patricia M.; Snustad, Daniel C.; Spawn, Terence D.  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: U.S., 25 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 US 5399291 A 19950321 US 1993-129256 19930930  
 FI 9404002 A 19950331 FI 1994-4002 19940831  
 AU 9472806 A1 19950413 AU 1994-72806 19940902  
 AU 683282 B2 19971106  
 CA 2131499 A1 19950331 CA 1994-2131499 19940906  
 JP 07188660 A2 19950725 JP 1994-226519 19940921  
 EP 646636 A1 19950405 EP 1994-115407 19940929  
 EP 646636 B1 20000823  
 R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE  
 ES 2149229 T3 20001101 ES 1994-115407 19940929  
 PRIORITY APPLN. INFO.: US 1993-129256 19930930

AB The F-containing, chiral and achiral liquid crystal compds. comprise (a) an aliphatic fluorocarbon terminal portion comprising a perfluorinated or partially-fluorinated alkylene group and a terminal hydrocarbon alkyl group, the groups optionally containing 21 catenane ether O atom; (b) an aliphatic hydrocarbon terminal portion; and (c) a central core connecting the terminal portions. The compds. have smectic mesophases or latent smectic mesophases and are useful, for example, in liquid crystal display devices.

L13 ANSWER 53 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 115:135807 MARPAT Full-text  
 TITLE: Process for producing 3-substituted thio-3-cephem compounds  
 INVENTOR(S): Yamamoto, Yuichi; Okonogi, Tsuneo; Shibahara, Seiji; Inoue, Shigeharu  
 PATENT ASSIGNEE(S): Meiji Seika Kaisha, Ltd., Japan

SOURCE: PCT Int. Appl., 41 pp.  
 CODEN: PIXKD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE  
 WO 9109037 A1 19910627 WO 1990-JP1599 19901207  
 W: US  
 RW: DE, ES, FR, GB, IT  
 JP 03178980 A2 19910802 JP 1989-316424 19891207  
 JP 06086459 B4 19941102  
 EP 504404 A1 19920923 EP 1991-900053 19901207  
 EP 504404 B1 19970606  
 R: DE, ES, FR, GB, IT  
 ES 2104688 T3 19971016 ES 1991-900053 19901207  
 US 5294705 A 19940315 US 1992-853730 19920603  
 PRIORITY APPLN. INFO.: JP 1989-316424 19891207  
 WO 1990-JP1599 19901207  
 OTHER SOURCE(S): CASREACT 115:135807  
 GI

AB Title compds. I (R = acyl, R1 = carboxy protective group; R2 = alkyl, cycloalkyl, heterocyclyl, heterocyclylmethyl) were prepared by reaction of acylthiophenecarboxylates XI (R, R1 = same as above; R3 = alkyl, (un)substituted aryl with R2X (X = leaving group) in the presence of a secondary amine and a tertiary amine. Thus, stirring p-nitrobenzyl 7-phenylacetamido-3-acetylthio-3-cephem-4-carboxylate with Et3N and morpholine in DMF and benzene at 5° for 10 min followed by stirring with Me2SO4 for 10 min gave 73% p-nitrobenzyl 7-phenylacetamido-3-methylthio-3-cephem-4-carboxylate.

L13 ANSWER 54 OF 54 MARPAT COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 113:96027 MARPAT Full-text  
 TITLE: Method, detergent, and cleaving agent for reversible alteration of hydrophilic properties of a material  
 INVENTOR(S): Switchenko, Arthur C.; Kurn, Nurith; Ullman, Edwin F.; Pirolo, Marcel; Berger, Donald E., Jr.; Neukom, Christian  
 PATENT ASSIGNEE(S): Syntex (U.S.A.), Inc., USA  
 SOURCE: Ger. Offen., 20 pp.  
 CODEN: GWXKBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3924443	A1	19900208	DE 1989-3924443	19890724
US 5116726	A	19920526	US 1988-223501	19880725
FR 2634394	A1	19900126	FR 1989-9943	19890724
FR 2634394	D1	19940128		
GB 2221989	A1	19900221	GB 1989-16806	19890724
GB 2221989	B2	19930127		
JP 02111757	A2	19900424	JP 1989-191227	19890724
JP 2892692	B2	19990517		
CA 1340353	A1	19990126	CA 1989-606510	19890724
US 5563038	A	19961008	US 1993-154340	19931118
US 5670690	A	19970923	US 1995-455920	19950531
US 5840508	A	19981124	US 1995-455424	19950531
PRIORITY APPLN. INFO.:			US 1988-223501	19880725
			US 1992-879655	19920506
			US 1993-154340	19931118

**AB** Antibodies, receptors, and microbial antigens are solubilized, and their hydrophilic properties are enhanced by treatment with a detergent L-J [L = lipophilic moiety YAZ; J = hydrophilic moiety comprising an acid (e.g. C<sub>10</sub>COOH, P(O)(OR)<sub>2</sub>)(OR)<sub>2</sub> or a salt thereof, Y = C<sub>2</sub>-12 alkyl, alkenyl, or alkynyl or C<sub>7</sub>-12 alkyl, or aralkynyl, or aralkynyl; A = S, Se, CHX, CH<sub>2</sub>CH=CH<sub>2</sub>, SCH<sub>2</sub>CH<sub>3</sub>, S<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>Br, SO<sub>3</sub>Br<sub>2</sub>; X = Cl, Br, I, Z = (un)saturated C<sub>1</sub>-10 alkylene, C<sub>7</sub>-10 aralkylene; R = H, lower alkyl]. Anal. test kits which contain L-J for solubilization of the analyte are described. L-J may subsequently be inactivated by nucleophilic cleavage (with e.g. a thiosulfinate, mercapto acid, thiourea, hydroxylamine, hydrazine, hydrazide, or NH<sub>3</sub>), oxidation (with e.g. a peroxide, per acid, hypochlorite, or hypobromite), or reduction (with e.g. a sulfite, hyposulfite, or mercaptoan). L-J and the cleaving agent may also be applied for reversible wetting of hydrophobic surfaces. Thus, cell surface antigens of *Neisseria gonorrhoeae* were solubilized in buffer congl. 0.5% Me(CH<sub>2</sub>)<sub>5</sub>SO<sub>3</sub>Na, the detergent was oxidized with 1% H<sub>2</sub>O<sub>2</sub>, and the antigens were adsorbed on a nitrocellulose filter and treated with rabbit antigenococcal antiserum and peroxidase-labeled goat anti-rabbit IgG for colorimetric determination of the antigen by addition of dicerboxidine and H<sub>2</sub>O<sub>2</sub>. A related detergent, Me(CH<sub>2</sub>)<sub>6</sub>SO<sub>3</sub>Na, was prepared by reaction of Me(CH<sub>2</sub>)<sub>6</sub>SH with NaH and Cl(CH<sub>2</sub>)<sub>6</sub>OH and esterification with C<sub>10</sub>COOH.

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L14	162	SEA ABB=ON	PLU=ON	"BOUVIER E"?/AU
L15	269	SEA ABB=ON	PLU=ON	("COPTON B"? OR "COMPTON B"?)/AU
L16	449	SEA ABB=ON	PLU=ON	"GEBLER J"?/AU
L17	191	SEA ABB=ON	PLU=ON	"GILAR M"?/AU
L18	27791	SEA ABB=ON	PLU=ON	("YU Y"? OR "YING Y"?)/AU
L19	25309	SEA ABB=ON	PLU=ON	"LEE P"?/AU
L20	17049	SEA ABB=ON	PLU=ON	"BROWN E"?/AU
L21	2	SEA ABB=ON	PLU=ON	"BROWN E"?/AU
		AND L19 AND L20		
L22	37	SEA ABB=ON	PLU=ON	L14 AND (L15 OR L16 OR L17 OR L18 OR L19 OR L20)
L23	16	SEA ABB=ON	PLU=ON	L15 AND (L16 OR L17 OR L18 OR L19 OR L20)
L24	115	SEA ABB=ON	PLU=ON	L16 AND (L17 OR L18 OR L19 OR L20)
L25	32	SEA ABB=ON	PLU=ON	L17 AND (L19 OR L20 OR L18)
L26	45	SEA ABB=ON	PLU=ON	L18 AND (L19 OR L20)
L27	10	SEA ABB=ON	PLU=ON	L19 AND L20
L28	53	SEA ABB=ON	PLU=ON	(L22 OR L24 OR L25 OR L26 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19 OR L20) AND (SURFACTANT OR SURFACE(1A) ACTIVE)(L) (REACT7 OR RXN)
L29	73	SEA ABB=ON	PLU=ON	L21 OR L23 OR L27 OR L28
L30	45	DUP	REM L29	(2 DUPLICATES REMOVED)

L30 ANSWER 1 OF 45 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2006-621178 (64) WPIDS  
DOC. NO. CPI: C2006-191633 (64)  
DOC. NO. NON-CPI: N2006-500440 (64)  
TITLE: Organic electrolytic solution for lithium battery, containing lithium salt, surfactant and organic solvents of preset properties

DERWENT CLASS:

INVENTOR:

PATENT ASSIGNEE: (SMSU-C) SAMSUNG DENKAN KK; (CHOI-I) CHOI J; (KIMD-I) KIM D; (LEEE-I) LEE E; (LEES-I) LEE S; (RYUY-I) RYU Y; (SONG-I) SONG S

COUNTRY COUNT: 2

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20060204856	A1	20060914 (200664)*	EN	15	[5]	
JP 2006228741	A	20060831 (200664)	JA	26		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20060204856	A1	US 2006-357429	20060217
JP 2006228741	A	JP 2006-42628	20060220

PRIORITY APPLN. INFO: KR 2005-130616 20051227  
KR 2005-13526 20050218  
KR 2005-70970 20050803

AN 2006-621178 (64) WPIDS

AB US 20060204856 A1 UPAB: 20061005

NOVELTY - An organic electrolytic solution contains a lithium salt, an organic solvent and a surfactant containing a hydrophobic portion having an aromatic group. The organic solvent contains solvent (I) having high dielectric constant, and solvent (II) having low boiling point.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for lithium battery (1), which has a cathode (2), an anode (3), and the organic electrolytic solution.

USE - For lithium battery (claimed) used in portable electronic devices such as video cameras, cellular phones, and notebook computer.

ADVANTAGE - The organic electrolytic solution suppresses side reactions on the surfaces of anodes, and maintains the reliability of charging and discharging reactions of battery.

DESCRIPTION OF DRAWINGS - The figure shows the schematic diagram of the lithium battery.

Lithium battery (1)

Cathode (2)

Anode (3)

Separator (4)

Battery case (5)

L30 ANSWER 2 OF 45 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2006-362215 (37) WPIDS

DOC. NO. CPI: C2006-117700 (37)

DOC. NO. NON-CPI: N2006-306064 (37)

TITLE: Ink composition for inkjet printing, comprising aqueous vehicle and modified pigment comprising specific pigment

DERWENT CLASS: A13; A25; A97; G02; T04

INVENTOR: CHEN X; LANE G A; MA Z; SARKISIAN G M; YU Y

PATENT ASSIGNEE: (CHEN-I) CHEN X; (LANE-I) LANE G A; (MAZ-I) MA Z; (SARK-I) SARKISIAN G M; (YUY-I) YU Y

COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20060106132	A1	20060518 (200637)*	EN	20	[8]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20060106132	A1 Provisional	US 2004-621501P	20041022
US 20060106132	A1	US 2005-240431	20050930

PRIORITY APPLN. INFO: US 2005-240431 20050930  
US 2004-621501P 20041022

AN 2006-362215 (37) WPIDS

AB US 20060106132 A1 UPAB: 20060612

NOVELTY - The ink composition comprises an aqueous vehicle and a modified pigment comprising specific pigment.

DETAILED DESCRIPTION - The ink composition comprises an aqueous vehicle and a modified pigment comprising pigment of formula (A). PG=polyethylene glycol or polypropylene glycol; D=pigment; and m, n, o,p=integer

the ratio of n and m is 1.1-4:1. o and p have value about 5-100% of the value of m. An INDEPENDENT CLAIM is included for the manufacturing method of ink composition. The method involves admixing a pigment having polymeric binder with an aqueous vehicle to form an ink fluid, and admixing unattached polymeric binder with the ink fluid. The polymeric binders attached to the pigment are chemically similar to the unattached polymeric binders.

USE For inkjet printing.

ADVANTAGE - The ink composition has excellent stability and compatibility with several solvents. The ink composition has reduced viscosity and favorable rheological properties. The ink composition provides image having high glossiness and uniform density.

L30 ANSWER 3 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 1

ACCESSION NUMBER: 2006561204 EMBASE Full-text

TITLE: The genome of the sea urchin *Strongylocentrotus purpuratus*

AUTHOR: Sodergren E.; Weinstock G.M.; Davidson E.H.; Cameron R.A.; Gibbs R.A.; Angerer R.C.; Angerer L.M.; Arnone M.I.; Burgess D.R.; Burke R.D.; Coffman J.A.; Dean M.; Elphick M.R.; Ettensach C.A.; Foltz K.R.; Hamdoun A.; Hyne R.O.; Klein W.H.; Marzluff W.; McCleay D.R.; Morris R.L.; Mushegian A.; Rast J.P.; Smith L.C.; Thorndyke M.C.; Vasquez V.D.; Wessel G.M.; Wray G.; Zhang L.; Eslis C.G.; Ermolaeva O.; Hlavina W.; Hofmann G.; Kitts P.; Landrum M.J.; Mackay A.J.; Maglott D.; Panopoulou G.; Poustka A.J.; Pruitt K.; Sapejnikov V.; Song X.; Souvorov A.; Solovyev V.; Wei Z.; Whitaker C.A.; Worley K.; Durbin R.; Prinjha R.; Settles R.; Severson T.; Gonzalez-Garay M.L.; Jackson A.R.; Milosavljevic A.; Tong M.; Kilian C.E.; Livingston B.T.; Wilt F.H.; Adams N.; Belle M.; Carbonneau S.; Cheung R.; Cormier P.; Cossen B.; Croce J.; Fernandez-Guerra A.; Geneviere A.-M.; Goel M.; Kelkar H.; Morales J.; Muñoz-Lorillón O.; Robertson A.J.; Goldstone J.V.; Cole B.; Epel D.; Gold B.; Hahn M.E.; Howard-Asphy M.; Scally M.; Stegeman J.J.; Allgood E.L.; Cool J.; Judkins K.M.; McCafferty S.S.; Musante A.M.; Obar R.A.; Rawson A.P.; Rossetti B.J.; Gibbons I.R.; Hoffman M.P.; Leone A.; Istrail S.; Materna S.C.; Samant M.P.; Stolc V.; Tongprasit W.; Tu Q.; Bergeron K.-F.; Brandhorst B.P.; Whittle J.; Berner K.; Bottjer D.J.; Celestani C.; Peterson K.; Chow E.; Yuan Q.A.; Elhaik E.; Graur D.; Reess J.T.; Bodeker I.; Heesun S.; Marra M.A.; Schein J.; Anderson M.K.; Brockton V.; Buckley K.M.; Cohen A.H.; Fugmann S.D.; Hibino T.; Loza-Coll M.; Majeske A.J.; Messier C.; Nair S.V.; Pancer Z.; Terwilliger D.P.; Agca C.; Arboleda E.; Chen N.; Churcher A.M.; Hallbrook J.; Humphrey G.W.; Idris M.M.; Kiyan T.; Liang S.; Mellott D.; Mu X.; Murray G.; Olinska R.P.; Raible F.; Rose M.; Taylor J.S.; Tessmar-Raible K.; Wang D.; Wilson K.H.; Yaguchi S.; Gaasterland T.; Galindo B.E.; Gunesaratne H.J.; Juliano C.; Kinukawa M.; Moy G.W.; Neill A.T.; Nomura M.; Raisch M.; Reade A.;

Roux M.M.; Song J.L.; Su Y.-H.; Townley I.K.; Voronina E.; Wong J.L.; Amore G.; Branno M.; Brown B.R.; Cavalieri V.; Duboc V.; Dulequin L.; Flytzanis C.; Gache C.; Lapraz F.; Lepage T.; Locascio A.; Martinez P.; Matassi G.; Matrangis V.; Range R.; Rizzo F.; Rottinger E.; Wilson K.; Beana W.; Bradham C.; Byrus C.; Glenn T.; Hussain S.; Loza M.; Manning G.; Miranda E.; Thomason R.; Walton K.; Wikramenayake A.; Whitaker C.; Wu S.-Y.; Xu R.; Brown C.T.; Chen L.; Gray R.F.; Lee P.Y.; Nam J.; Oliveri P.; Smith J.; Muzyk D.; Bell S.; Chacko J.; Cree A.; Curry S.; Davis C.; Dini B.; Dugan-Rocha S.; Fowler J.; Gill R.; Hamilton C.; Hernandez J.; Hines S.; Hume J.; Jackson L.; Jolivet A.; Kovar C.; Lee S.; Lewis L.; Miner G.; Morgan M.; Nazareth L.V.; Okwuonu G.; Parker D.; Pu L.-L.; Thorn R.; Wright R.

**CORPORATE SOURCE:** G.M. Weinstock, Human Genome Sequencing Center, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, United States. [gstock@bcm.edu](mailto:gstock@bcm.edu)

**SOURCE:** Science, (10 Nov 2006) Vol. 314, No. 5801, pp. 941-952.

Refs: 54  
ISSN: 0036-8075 E-ISSN: 1095-9203 CODEN: SCIEAS

**COUNTRY:** United States  
**DOCUMENT TYPE:** Journal; Article  
**FILE SEGMENT:** 029 Clinical Biochemistry  
**LANGUAGE:** English  
**SUMMARY LANGUAGE:** English  
**ENTRY DATE:** Entered STN: 30 Nov 2006  
Last Updated on STN: 30 Nov 2006

**AB** We report the sequence and analysis of the 814-megabase genome of the sea urchin *Strongylocentrotus purpuratus*, a model for developmental and systems biology. The sequencing strategy combined whole-genome shotgun and bacterial artificial chromosome (BAC) sequences. This use of BAC clones, aided by a pooling strategy, overcame difficulties associated with high heterozygosity of the genome. The genome encodes about 23,300 genes, including many previously thought to be vertebrate innovations or known only outside the deuterostomes. This echinoderm genome provides an evolutionary outgroup for the chordates and yields insights into the evolution of deuterostomes.

L30 ANSWER 4 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2006:827234 HCPLUS Full-text

**TITLE:** Transport and separation of Cu(II) by N902 -kerosene-HCl strip dispersion hybrid liquid membrane

**AUTHOR(S):** Yu, Yuan-Da; Gu, Shu-Xiang; Luo, Xiao-Jian; Ma, Ming; He, Ding-Sheng

**CORPORATE SOURCE:** College of Chemistry and Chemical Engineering, Hunan Normal University, Changsha, 410081, Peop. Rep. China

**SOURCE:** Yingyong Huaxue (2006), 23(7), 766-769

**PUBLISHER:** CODEN: YIHVED; ISSN: 1000-0518

**DOCUMENT TYPE:** Kexue Chubanshe

**LANGUAGE:** Chinese

**AB** A novel liquid membrane system, denoted as strip dispersion hybrid liquid membrane (SDHLM), containing N902 in kerosene as carrier, was studied as the function of dodecanol concentration, pH in feed phase, volume ratio between stripping solution and organic phase, and circulating flux of feed phase or

strip dispersion phase. Solvent extraction verified that 1 mol of Cu<sup>2+</sup> ions reacted with 2 mol of carrier and formed 1 mol of the Cu(II)-carrier complex. The expts. showed that Cu(II) could be efficiently transported into the stripping solution by SDHLM. When pH = 2 in the feed phase, the recovery of copper(II) in the stripping phase was 93.6%, while iron(III) was 1.83% for Cu<sup>2+</sup>/Fe<sup>3+</sup> = 1. The recovery of copper(II) in the stripping phase was 89.8%, while .ovrhdot.zinc(II) was 1.38% for Cu<sup>2+</sup>/Zn<sup>2+</sup> = 1 after transport for 4 h. When the concns. of Cu<sup>2+</sup>, Fe<sup>3+</sup>, Co<sup>2+</sup>, Ni<sup>2+</sup> and Zn<sup>2+</sup> in the feed phase (pH = 1.5) were 4.52, 5.07, 0.442, 35.7 and 1.24 g/L, resp., the recovery of Cu<sup>2+</sup> in the stripping phase was 81.5%, while other metal ions were below 2.10% after the transport for 6 h. Separation expts. indicated that N902 was an excellent extractant for Cu(II). SDHLM has several advantages over SLM and ELM: increased membrane stability, improved flux, improved recovery of target species concentration, no usage of high active surfactant and demulsification device, and reduced cost.

L30 ANSWER 5 OF 45 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2005-194922 [20] WPIDS

**CROSS REFERENCE:** 2003-585066

**DOC. NO. CPI:** C2005-061557 [20]

**DOC. NO. NON-CPI:** N2005-161094 [20]

**TITLE:** Test strip for determining concentration of analyte e.g. glucose in physiological sample comprises fluid transfer element having two areas with different thickness where second area transfers minimal sample volume to reaction area

**DERVENT CLASS:** A69; B04; S03

**INVENTOR:** MATZINGER D; QURAISHI K R; YU Y S

**PATENT ASSIGNEE:** (MATZINGER D; QURAISHI K R; (YUYS-I) QURAISHI K R; (YUYS-I) YU Y S

**COUNTRY COUNT:** 1

**PATENT INFO ABBR.:**

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20050042135	A1	20050224	(200520)	EN	19[5]	

**APPLICATION DETAILS:**

PATENT NO	KIND	APPLICATION	DATE
US 20050042135	A1 Div Ex	US 2001-946215	20010905
US 20050042135	A1	US 2004-938965	20040910

**PRIORITY APPLN. INFO:** US 2004-938965 20040910

US 2001-946215 20010905

AN 2005-194922 [20] WPIDS

CR 2003-585066

AB US 20050042135 A1 UPAB: 20050708 NOVELTY - A test strip (2) comprises a fluid transfer element (10) for transferring the sample to a reaction area (8) of the strip. The fluid transfer element comprises two areas (12, 14) having different thickness. The second area is capable of being saturated with a sample volume of 1 - 7 microl and transfers 0.1 - 5 microl of sample to reaction area of the strip. The second area further comprises a lumen.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) making the test strip;

**ADVANTAGE** - The desulfurizer has improved reactivity and efficiency, and good abrasion resistance and regeneration.

L30 ANSWER 7 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2  
ACCESSION NUMBER: 2005-842699 HCPLUS Full-text

**DOCUMENT NUMBER:** 143:342133

**TITLE:** A rapid sample preparation method for mass spectrometric characterization of N-linked glycans

**AUTHOR(S):** Yu, Ying-Qing; Gilar, Martin; Kaska, Jennifer; Gabler, John C.

**CORPORATE SOURCE:** Life Sciences R&D, Waters Corporation, Milford, MA, 01757, USA

**SOURCE:** Rapid Communications in Mass Spectrometry (2005), 19(16), 2331-2336

**PUBLISHER:** CODEN: RCMSER; ISSN: 0951-4198

**DOCUMENT TYPE:** Journal

**LANGUAGE:** English

**AB** A rapid method for anal. of glycans of glycoproteins is presented. This method comprised deglycosylation, sample cleanup and matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS) anal. of glycans. The enzymic deglycosylation of N-linked glycoproteins was enhanced in terms of speed and reproducibility using an enzyme-friendly surfactant. The released glycans were desalts using a micro-scale solid phase extraction (SPE) device packed with a hydrophilic interaction chromatog. (HILIC) sorbent. Hydrophilic glycans were well retained by SPE, while salts and surfactants were removed from the sample. The glycans were eluted using 25-50  $\mu$ L of solvent and analyzed directly without derivatization using MALDI-MS. MALDI quadrupole time-of-flight (Q-ToF) instrumentation was utilized for glycan profiling and structure characterization by tandem mass spectrometry (MS/MS). The presented method allows sensitive anal. of glycans benefiting from optimized deglycosylation reactions and efficient sample cleanup.

**REFERENCE COUNT:** 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 8 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2005-964076 HCPLUS Full-text

**DOCUMENT NUMBER:** 143:298063

**TITLE:** Synthesis of the new reagent 1-azobenzene-3-(5-bromo-2-pyridyl)triazene and its color reaction with cadmium

**AUTHOR(S):** Zheng, Yun-fa; Zhang, Chun-niu; Ying, Yue-fang

**CORPORATE SOURCE:** Dep. of Chem., Lishui Univ., Lishui, 323000, Peop. Rep. China

**SOURCE:** Huaxue Shiji (2005), 27(7), 413-414, 436

**PUBLISHER:** CODEN: HUSHDR; ISSN: 0258-3283

**DOCUMENT TYPE:** Journal

**LANGUAGE:** Chinese

**OTHER SOURCE(S):** CASREACT 143:298063

**AB** The chromogenic reagent 1-azobenzene-3-(5-bromo-2-pyridyl)triazene (ABBPT) was synthesized and its color reaction with Cd was studied. In the presence of the surface active agent Triton X-100 and in the Na2B4O7-NaOH medium of pH 11.0, ABBPT formed a red complex with Cd(II). The apparent molar absorptivity of the complex was 1.026 + 105 L mol<sup>-1</sup> cm<sup>-1</sup> at 525 nm (Amax). The molar ratio of Cd(II) to ABBPT was 1:4. Beer's law was obeyed at 0-15

L30 ANSWER 6 OF 45 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2006-373730 [39] WPIDS

**DOC. NO. CPI:** C2006-120776 [39]

**TITLE:** High-temperature gas composite oxide desulfurizer

**DERVENT CLASS:** H09

**INVENTOR:** BIAN W; BU X; DENG Y; DU M; GONG Z; JI X; LI W; LIU Y; PENG W; WANG P; WEI F; XIN S; XU Z; YING Y; ZHANG C

**PATENT ASSIGNEE:** (COAL-N) COAL GEN ACAD

**COUNTRY COUNT:** 1

**PATENT INFO ABBR.:**

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
CN 1712500	A	20051228	(200639)	ZH	{0}	

**APPLICATION DETAILS:**

PATENT NO	KIND	APPLICATION	DATE
CN 1712500 A	CN	2004-10047891	20040621

**PRIORITY APPLN. INFO:** CN 2004-10047891 20040621  
AN 2006-373730 [39] WPIDS  
AB CN 1712500 A UPAB: 20060620 NOVELTY - A high-temperature gas composite oxide desulfurizer comprises an active component zinc oxide (33-50%) and multiple additives (31-51%) comprising titanium dioxide, active stabilizer, surface modifier, strength reinforcer, regenerative improver and composite binder. The process is carried out by mixing the active component with additives, grinding, kneading, forming, laying aside, drying, particle rectifying, calcining at 850-1060 $^{\circ}$ C in a high-temperature furnace, and obtaining the desulfurizer. USE - Used in fixed bed, fluidized bed or desulfurizing reactors of flowing bed.

μg/25 mL for Cd. The method was applied to the direct determination of Cd in practical samples with satisfactory results.

L30 ANSWER 9 OF 45 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2004-784631 [77] WPIDS  
 DOC. NO. CFI: C2004-274656 [77]  
 DOC. NO. NON-CFI: N2004-618386 [77]  
 TITLE: Preparation of a sample for mass spectrometry analysis involves reacting a triaryl phosphonium labeling reagent with a sample containing an analyte having an exposed group  
 DERVENT CLASS: E11; J04; 903  
 INVENTOR: CHEN W; GEBLER J C; LEE P J J  
 PATENT ASSIGNEE: (WATE-N) WATERS INVESTMENTS LTD  
 COUNTRY COUNT: 106

## PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2004092707	A2	20041028 (200477)*	EN	99[0]		
DE 112004000613	T5	20060308 (200618)	DE			
JP 2006523845	W	20061019 (200669)	JA	71		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004092707	A2	WO 2004-US11426	20040414
DE 112004000613	T5	DE 2004-112004000613	20040414
DE 112004000613	T5	WO 2004-US11426	20040414
JP 2006523845	W	WO 2004-US11426	20040414
JP 2006523845	W	JP 2006-510002	20040414

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 112004000613	T5	Based on WO 2004092707 A
JP 2006523845	W	Based on WO 2004092707 A

PRIORITY APPLN. INFO: US 2003-462997 P 20030414

AN 2004-784631 [77] WPIDS

AB WO 2004092707 A2 UPAB: 20050707

NOVELTY - Preparation (P1) of a sample for mass spectrometry analysis involves obtaining a triaryl phosphonium labeling reagent with a reactive group, obtaining a sample containing an analyte that has an exposed group and reacting the analyte with the labeling reagent.  
 DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:  
 (1) preparation (P2) of a sample for mass spectrometry analysis involves obtaining at least two triaryl phosphonium labeling reagents, each having a reactive group, where the reactive groups of the labeling reagents are all the same and the molecular weights of the triaryl phosphonium groups of the labeling reagents are different from each other, obtaining a sample containing an analyte that has an exposed group, and reacting the labeling reagents with the analyte such that the triaryl phosphonium linked analytes are formed;  
 (2) preparation (P3) of a sample for mass spectrometry analysis involving obtaining a sample comprising an analyte having an exposed group and reacting the analyte with at least three labeling reagents of formulae (Ia), (Ib) and

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10/516418  
 L30 ANSWER 11 OF 45 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:869470 SCISEARCH Full-text  
 THE GENUINE ARTICLE: 855PS  
 TITLE: Preparation and characterization of SnO nanowhiskers  
 AUTHOR: Jia Z J; Zhu L P (Reprint); Liao G H; Yu Y;  
 CORPORATE SOURCE: Cent China Normal Univ, Dept Phys, Ctr Nanosci & Technol, Wuhan 430079, Peoples R China (Reprint); Cent China Normal Univ, Coll Chem, Wuhan 430079, Peoples R China  
 zhuluping8080@yahoo.com.cn

COUNTRY OF AUTHOR: Peoples R China  
 SOURCE: SOLID STATE COMMUNICATIONS, (OCT 2004) Vol. 132, No. 2, pp. 79-82.

ISSN: 0038-1098.

PUBLISHER: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 13

ENTRY DATE: Entered STN: 22 Oct 2004

Last Updated on STN: 22 Oct 2004

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB In this paper, some single-crystal line Stannous Oxide (SnO) nanowhiskers were successfully prepared by a wet method using SnCl<sub>2</sub> · 2H<sub>2</sub>O as raw material and cetyltrimethylammoniumbromide (CTAB) as surfactant. The morphologies, purity and sizes of the products were characterized by transmission electron microscopy, powder X-ray diffractometry and standard selected area electron diffraction. The results showed that the diameter and the length of the particles were 10-30 and 200-400 nm, respectively. The influence of some reaction parameters, including the pressure, the temperature, the surfactant size and the reaction duration, on the formation, morphology and particle size of SnO crystallite is discussed. (C) 2004 Elsevier Ltd. All rights reserved.

L30 ANSWER 12 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3  
 ACCESSION NUMBER: 2003:972250 HCPLUS Full-text  
 DOCUMENT NUMBER: 140:25191  
 TITLE: Destructible surfactants and uses thereof  
 INVENTOR(S): Bouvier, Edouard S. P.; Copton,

(Ic); (3) a composition (C1) comprising at least two different labeling reagents (Ia), each having a different molecular weight; and (4) a kit for use in preparing a sample for mass spectrometry analysis comprising the labeling reagents (Ia), buffer chemicals and instructions for use in sample preparation methods. (Ar3P+R)X- (Ia)  
 (Ar'3P+R)X- (Ib)  
 ((Ar1)3P+R)X- (Ic)  
 Ar, Ar', Ar = aryl;  
 R = phosphorous atom;  
 R = reactive group comprising a functional group that reacts with the exposed functional group to form a covalent bond, to link the analyte to the triaryl phosphonium group of the labeling reagent;  
 X- = negatively charged counter ion. Provided that in (P2), Ar and Ar' of (Ia) and (Ib) are aryl such that the molecular weight of Ar3P is different from the weight of Ar'3P.  
 USE - For the preparation of a sample for mass spectrometry analysis e.g. quantitative matrix-assisted laser desorption/ionization mass spectrometry or electrospray mass spectrometry (claimed).  
 ADVANTAGE - The methods provide quantitative mass spectrometry measurement of molecules at the picomole, femtomole, and attomole level. The measurement of m/z (mass/charge or mass/ionization ratio) values is not complicated by the low mass interference that a matrix normally offers and therefore the methods provide mass spectrometry analysis of low molecular weight samples as well as mixtures of high and low molecular weight samples.

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004092707	A2	WO 2004-US11426	20040414
DE 112004000613	T5	DE 2004-112004000613	20040414
DE 112004000613	T5	WO 2004-US11426	20040414
JP 2006523845	W	WO 2004-US11426	20040414
JP 2006523845	W	JP 2006-510002	20040414

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 112004000613	T5	Based on WO 2004092707 A
JP 2006523845	W	Based on WO 2004092707 A

PRIORITY APPLN. INFO: US 2003-462997 P 20030414

AN 2004-784631 [77] WPIDS

AB WO 2004092707 A2 UPAB: 20050707

NOVELTY - Preparation (P1) of a sample for mass spectrometry analysis involves obtaining a triaryl phosphonium labeling reagent with a reactive group, obtaining a sample containing an analyte that has an exposed group and reacting the analyte with the labeling reagent.  
 DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:  
 (1) preparation (P2) of a sample for mass spectrometry analysis involves obtaining at least two triaryl phosphonium labeling reagents, each having a reactive group, where the reactive groups of the labeling reagents are all the same and the molecular weights of the triaryl phosphonium groups of the labeling reagents are different from each other, obtaining a sample containing an analyte that has an exposed group, and reacting the labeling reagents with the analyte such that the triaryl phosphonium linked analytes are formed;  
 (2) preparation (P3) of a sample for mass spectrometry analysis involving obtaining a sample comprising an analyte having an exposed group and reacting the analyte with at least three labeling reagents of formulae (Ia), (Ib) and

94

## PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 2004019804	A1	20040930 (200469)*	EN	4[0]		
TW 2004009804	A	20040616 (200571)	ZH			
US 7041754	B2	20060509 (200633)	EN			

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004019820	A1	US 2003-735275	20031212
TW 2004009804	A	TW 2002-135910	20021212

PRIORITY APPLN. INFO: TW 2002-135910 20021212  
 AN 2004-708744 [69] WPIDS  
 AB US 2004019820 A1 UPAB: 20060122

94

NOVELTY - An emulsion type modifier comprises (parts per hundred) monomers of 6-12C diester of dicarboxylic acid (15-35), monomers of 2-16C vinyl ester (15-35), monomers of 4-8C alkyl acrylate (35-65), monomers containing acetocetoxo functional group (0.1-2), non-ionic surfactants (0.1-2), anionic surfactant (0.4-3), and de-ionized water (60-70). The total weight of the first three components is 100 parts, while the remaining components are added based on the total weight of the first three components.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a pressure-sensitive adhesive comprising (parts per hundred) pressure-sensitive emulsion acrylic adhesive (100), and emulsion type of modifier (5-30).

USE - For use in pressure-sensitive emulsion acrylic adhesives.

ADVANTAGE - The invention improves properties of pressure-sensitive emulsion acrylic adhesives, e.g. surface adhesion towards the low surface energy substrates, e.g. polyolefins, and steel. It has high stability and good durability. It improves loop tack and holding power of the adhesives.

L30 ANSWER 11 OF 45 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:869470 SCISEARCH Full-text  
 THE GENUINE ARTICLE: 855PS  
 TITLE: Preparation and characterization of SnO nanowhiskers  
 AUTHOR: Jia Z J; Zhu L P (Reprint); Liao G H; Yu Y;  
 CORPORATE SOURCE: Cent China Normal Univ, Dept Phys, Ctr Nanosci & Technol, Wuhan 430079, Peoples R China (Reprint); Cent China Normal Univ, Coll Chem, Wuhan 430079, Peoples R China  
 zhuluping8080@yahoo.com.cn

COUNTRY OF AUTHOR: Peoples R China  
 SOURCE: SOLID STATE COMMUNICATIONS, (OCT 2004) Vol. 132, No. 2, pp. 79-82.

ISSN: 0038-1098.

PUBLISHER: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 13

ENTRY DATE: Entered STN: 22 Oct 2004

Last Updated on STN: 22 Oct 2004

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB In this paper, some single-crystal line Stannous Oxide (SnO) nanowhiskers were successfully prepared by a wet method using SnCl<sub>2</sub> · 2H<sub>2</sub>O as raw material and cetyltrimethylammoniumbromide (CTAB) as surfactant. The morphologies, purity and sizes of the products were characterized by transmission electron microscopy, powder X-ray diffractometry and standard selected area electron diffraction. The results showed that the diameter and the length of the particles were 10-30 and 200-400 nm, respectively. The influence of some reaction parameters, including the pressure, the temperature, the surfactant size and the reaction duration, on the formation, morphology and particle size of SnO crystallite is discussed. (C) 2004 Elsevier Ltd. All rights reserved.

L30 ANSWER 12 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3  
 ACCESSION NUMBER: 2003:972250 HCPLUS Full-text  
 DOCUMENT NUMBER: 140:25191  
 TITLE: Destructible surfactants and uses thereof  
 INVENTOR(S): Bouvier, Edouard S. P.; Copton,

95

(Ic); (3) a composition (C1) comprising at least two different labeling reagents (Ia), each having a different molecular weight; and (4) a kit for use in preparing a sample for mass spectrometry analysis comprising the labeling reagents (Ia), buffer chemicals and instructions for use in sample preparation methods. (Ar3P+R)X- (Ia)  
 (Ar'3P+R)X- (Ib)  
 ((Ar1)3P+R)X- (Ic)  
 Ar, Ar', Ar = aryl;  
 R = phosphorous atom;  
 R = reactive group comprising a functional group that reacts with the exposed functional group to form a covalent bond, to link the analyte to the triaryl phosphonium group of the labeling reagent;  
 X- = negatively charged counter ion. Provided that in (P2), Ar and Ar' of (Ia) and (Ib) are aryl such that the molecular weight of Ar3P is different from the weight of Ar'3P.  
 USE - For the preparation of a sample for mass spectrometry analysis e.g. quantitative matrix-assisted laser desorption/ionization mass spectrometry or electrospray mass spectrometry (claimed).  
 ADVANTAGE - The methods provide quantitative mass spectrometry measurement of molecules at the picomole, femtomole, and attomole level. The measurement of m/z (mass/charge or mass/ionization ratio) values is not complicated by the low mass interference that a matrix normally offers and therefore the methods provide mass spectrometry analysis of low molecular weight samples as well as mixtures of high and low molecular weight samples.

## PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 2004019804	A1	20040930 (200469)*	EN	4[0]		
TW 2004009804	A	20040616 (200571)	ZH			
US 7041754	B2	20060509 (200633)	EN			

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004019820	A1	US 2003-735275	20031212
TW 2004009804	A	TW 2002-135910	20021212

PRIORITY APPLN. INFO: TW 2002-135910 20021212  
 AN 2004-708744 [69] WPIDS  
 AB US 2004019820 A1 UPAB: 20060122

94

NOVELTY - An emulsion type modifier comprises (parts per hundred) monomers of 6-12C diester of dicarboxylic acid (15-35), monomers of 2-16C vinyl ester (15-35), monomers of 4-8C alkyl acrylate (35-65), monomers containing acetocetoxo functional group (0.1-2), non-ionic surfactants (0.1-2), anionic surfactant (0.4-3), and de-ionized water (60-70). The total weight of the first three components is 100 parts, while the remaining components are added based on the total weight of the first three components.

DETAILED DESCRIPTION - INDEPENDENT CLAIM is included for a pressure-sensitive adhesive comprising (parts per hundred) pressure-sensitive emulsion acrylic adhesive (100), and emulsion type of modifier (5-30).

USE - For use in pressure-sensitive emulsion acrylic adhesives.

ADVANTAGE - The invention improves properties of pressure-sensitive emulsion acrylic adhesives, e.g. surface adhesion towards the low surface energy substrates, e.g. polyolefins, and steel. It has high stability and good durability. It improves loop tack and holding power of the adhesives.

## PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 2004019804	A1	20040930 (200469)*	EN	4[0]		
TW 2004009804	A	20040616 (200571)	ZH			
US 7041754	B2	20060509 (200633)	EN			

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004019820	A1	US 2003-735275	20031212
TW 2004009804	A	TW 2002-135910	20021212

PRIORITY APPLN. INFO: TW 2002-135910 20021212  
 AN 2004-708744 [69] WPIDS  
 AB US 2004019820 A1 UPAB: 20060122

94

NOVELTY - An emulsion type modifier comprises (parts per hundred) monomers of 6-12C diester of dicarboxylic acid (15-35), monomers of 2-16C vinyl ester (15-35), monomers of 4-8C alkyl acrylate (35-65), monomers containing acetocetoxo functional group (0.1-2), non-ionic surfactants (0.1-2), anionic surfactant (0.4-3), and de-ionized water (60-70). The total weight of the first three components is 100 parts, while the remaining components are added based on the total weight of the first three components.

DETAILED DESCRIPTION - INDEPENDENT CLAIM is included for a pressure-sensitive adhesive comprising (parts per hundred) pressure-sensitive emulsion acrylic adhesive (100), and emulsion type of modifier (5-30).

USE - For use in pressure-sensitive emulsion acrylic adhesives.

ADVANTAGE - The invention improves properties of pressure-sensitive emulsion acrylic adhesives, e.g. surface adhesion towards the low surface energy substrates, e.g. polyolefins, and steel. It has high stability and good durability. It improves loop tack and holding power of the adhesives.

## PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 2004019804	A1	20040930 (200469)*	EN	4[0]		
TW 2004009804	A	20040616 (200571)	ZH			
US 7041754	B2	20060509 (200633)	EN			

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004019820	A1	US 2003-735275	20031212
TW 2004009804	A	TW 2002-135910	20021212

PRIORITY APPLN. INFO: TW 2002-135910 20021212  
 AN 2004-708744 [69] WPIDS  
 AB US 2004019820 A1 UPAB: 20060122

94

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 1417584	A	20030514	CN 2001-133652	20011108
PRIORITY APPLN. INFO.:			CN 2001-133652	20011108

AB The method comprises centrifuging the (2-8) x 105 mL<sup>-1</sup> cell that is immobilized with 70-80% glacial acetic acid for 2-8 h to remove the immobilizing solution; washing with phosphate buffer; adding surfactant (0.25% Triton X-100), standing for 5-10 min, washing with phosphate buffer; mixing mouse-anti-human cyclin E monoclonal antibody with mouse-anti-human cyclin A monoclonal antibody and 0.01 g mL<sup>-1</sup> bovine serum albumin phosphate buffer to obtain mixed antibody; culturing the above treated cell with the mixed antibody at 2-8° C for 0.5-48 h; washing with phosphate buffer; mixing with fluorescein isothiocyanate labeled goat-anti-mouse Ig with 0.01 g mL<sup>-1</sup> bovine serum albumin phosphate buffer (at the volume ratio of 1:10-20); culturing the above cultured cell with the labeled Ig composite at room temperature in dark ambient for 20-30 min, washing with phosphate buffer; allowing to react with 0.005-0.1 mg mL<sup>-1</sup> propidium iodide-0.01 mg mL<sup>-1</sup> RNase phosphate buffer at room temperature in dark ambient for 20-30 min, and detecting via flow cytometer.

L30 ANSWER 14 OF 45 WPIDS COPYRIGHT 2006 THE THOMSON CORP ON STN

ACCESSION NUMBER: 2003-585066 [55] WPIDS

CROSS REFERENCE: 2005-194922

DOC. NO. CPI: C2003-158310 [55]

DOC. NO. NON-CPI: N2003-465739 [55]

TITLE: Test strip for determining concentration of analyte, e.g., glucose in physiological sample, comprises fluid transfer element for transferring sample to reaction area of test strip

DERWENT CLASS: A89; A96; B04; D16; P31; S03

INVENTOR: MATZINGER D; QUARASHI K; QUARASHI K R;

PATENT ASSIGNEE: (LIFE-N) LIFESCAN INC; (LIFE-N) LIFESCAN LLC; (MATZ-I) MATZINGER D; (QUAR-I) QUARASHI K R

COUNTRY COUNT: 39

## PATENT INFO ABBR.:

PATENT NO.	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20030044854	A1	20030306 (200355)*	EN	19(5)		
CA 2398077	A1	20030305 (200355)	EN			
CN 1407339	A	20030402 (200355)	ZH			
CZ 2002002966	A3	20030514 (200355)	CS			
EP 1291653	A2	20030312 (200355)	EN			
JP 2003139772	A	20030514 (200355)	JA 15			
KR 2003021143	A	20030312 (200355)	KO			
AU 2002300648	A1	20030612 (200455)	EN			
US 6884592	B2	20050426 (200528)	EN			
MX 2002008662	A1	20050201 (200564)	ES			
IN 2002000492	I2	200501028 (200580)	EN			
IL 151307	A	20060705 (200669)	EN			

## APPLICATION DETAILS:

PATENT NO.	KIND	APPLICATION	DATE
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97

US 20030044854 A1	CA 2398077 A1	CA 2002-2398077 20020814
AU 2002300492 A1	IN 2002000492 I2	AU 2002-300641 20020820
EP 1291653 A2	EP 1291653 A2	IN 2002-K0492 20020820
CZ 2002002966 A3	CZ 2002002966 A3	EP 2002-255891 20020823
IN 1407339 A	IN 1407339 A	CZ 2002-2961 20020903
JP 2003139772 A	JP 2003139772 A	CN 2002-131959 20020904
KR 2003021143 A	KR 2003021143 A	JP 2002-259176 20020904
MX 2002008662 A1	MX 2002008662 A1	KR 2002-53151 20020904
IL 151307 A	IL 151307 A	MX 2002-8662 20020904
		IL 2002-151307 20020904

PRIORITY APPLN. INFO: US 2001-946215 20010905  
AN 2003-585066 (55) WPIDS

CR 2005-194922

AB US 20030044854 A1 UPAB: 20060202

NOVELTY - A test strip (1) comprising a fluid transfer element (10) for transferring sample to a reaction area (8) of the test strip, is new. The fluid transfer element comprises first and second areas (12, 14), where the thickness of the first area differs from that of the second area.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(a) making the test strip comprising providing a compression mold assembly having a protrusion configured to mold a second area of the transport element; providing precursor material; inserting the precursor material within the mold assembly; and applying pressure to the precursor material to provide a resulting transport element; (b) making a transport element comprising providing a compression mold assembly; inserting a precursor material within the mold assembly; and applying pressure to the precursor material to provide the transport element; and

(c) a kit for determining the concentration of the analyte in a physiological sample comprising test strip; and substrate having instruction for using the test strip to determine the concentration of the analyte.

USE - (1) is useful for determining the concentration of the analyte, e.g., glucose in a physiological sample, e.g., interstitial fluid, blood, blood fractions or their constituent by applying sample to a test strip comprised of fluid transport element (claimed).

ADVANTAGE - The invention facilitates transfers of sample to a reaction area of the test strip. It is easy to use and manufacture.

DESCRIPTION OF DRAWINGS - The figure is an exploded view of the test strips. Reaction area (8)  
Fluid transfer element (10)  
First and second areas (12, 14)

L30 ANSWER 15 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2003-545292 HCPLUS Full-text

DOCUMENT NUMBER: 139:123224

TITLE: Synthesis, Characterization, and Catalytic Activity of Mesosstructured Titanosilicates Assembled from Polymer Surfactants with Preformed Titanosilicate Precursors in Strongly Acidic Media

AUTHOR(S): Meng, Xiangju; Li, Defeng; Yang, Xiaoyu; Yu, Yi; Wu, Shuo; Han, Yu; Yang, Qing; Jiang, Dazhen; Xiao, Feng-Shou

CORPORATE SOURCE: State Key Laboratory of Inorganic Synthesis and Preparative Chemistry, Department of Chemistry, Jilin University, Changchun, 130023, Peop. Rep. China

SOURCE: Journal of Physical Chemistry B (2003), 107(34), 1067-1069

98

8972-8980

CODEN: JPCBFK; ISSN: 1520-6106

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Novel mesostructured titanosilicates designated as MTS-9 have been successfully synthesized from assembly of preformed nanosized titanosilicate precursors with polymer surfactants. Mesoporous MTS-9 shows highly hydrothermal stability in boiling water (over 120 h) as compared with that of Ti-MCM-41 and SBA-15. In phenol hydroxylation, Ti-MCM-41 shows very low catalytic activity (2.5%), but MTS-9 exhibits very high catalytic activity, with phenol conversion of 26%, which is comparable with TS-1. In styrene epoxidation, MTS-9 shows high activity and selectivity similar to those of TS-1, which are much different from those of Ti-MCM-41. In 2,3,6-trimethylphenol hydroxylation, Ti-MCM-41 is inactive because of the relatively low oxidation ability of Ti species in the amorphous wall of Ti-MCM-41, and TS-1 is also inactive because of the inaccessibility of the small micropores of TS-1 to the large diameter of a bulky mol. like 2,3,6-trimethylphenol. However, MTS-9 is very active for this reaction with conversion of 18% indicating that MTS-9 is an effective catalyst for the oxidation of bulky mol. The MTS-9 samples were characterized with IR, UV-visible, UV-Raman, and numerous other techniques. The results suggest that the titanium species in MTS-9 are TS-1-like, and that the pore walls of MTS-9 contains primary and secondary structural building units, similar to those of microporous zeolites. Such unique structural features might be responsible for the observed strong oxidation ability and high hydrothermal stability of the mesostructured titanosilicates. Heating MTS-9 at 500 °C leads to the transformation of titanium species, giving relatively low catalytic conversion in phenol hydroxylation, which suggests that increasing thermal stability of titanium sites like TS-1 species in the mesoporous wall is still a great task for preparation of mesostructured titanosilicates.

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 16 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004-706917 HCPLUS Full-text

DOCUMENT NUMBER: 141:369274

TITLE: Preparation and characterization of SnO nanowhiskers

AUTHOR(S): Jia, Shi-jie; Zhu, Lu-ping; Liao, Gui-hong;

CORPORATE SOURCE: Wu, Xin; Tang, Yi-wen

SOURCE: Department of Physics, Center of Nano-Science and Technology, Central China Normal University, Wuhan, 430079, Peop. Rep. China

PUBLISHER: Solid State Communications (2003), Volume Date

2004, 132(2), 79-82

CODEN: SSCOAA; ISSN: 0038-1098

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this paper, some single-crystalline Stannous oxide (SnO) nanowhiskers were successfully prepared by a wet method using SnCl<sub>2</sub>·2H<sub>2</sub>O as raw material and cetyltrimethylammoniumbromide (CTAB) as surfactant. The morphologies, purity and sizes of the products were characterized by transmission electron microscopy, powder x-ray diffractometry and standard selected area electron diffraction. The results showed that the diameter and the length of the particles were 10-30 and 200-400 nm, resp. The influence of some reaction parameters, including the pressure, the temperature, the surfactant and the

reaction duration, on the formation, morphol. and particle size of SnO crystallite is discussed.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 17 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2003-26346 HCPLUS Full-text

DOCUMENT NUMBER: 139:65609

TITLE: Spectra studies on interaction of bovine serum albumin with acidic chrome blue K in acidic solution

AUTHOR(S): Yu, Ying; Liao, Jian; Huang, Fa-de

CORPORATE SOURCE: Department of Chemistry, South China Normal University, Canton, 510631, Peop. Rep. China

SOURCE: Guangpuxue Yu Guangpu Fenxi (2002), 22(6), 1067-1069

PUBLISHER: Beijing Daxue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB This paper investigated the interaction of acidic chrome blue K with bovine serum albumin (BSA). When BSA was added into acidic chrome blue K solution at pH 2.87 HCl-Mg buffer, bathochromic effect and hypochromicity were observed. With the increase in BSA concentration, the absorption peak at 523 nm decreased. It was considered that the combination of BSA with acidic chrome blue K is due to static electricity forces. The interaction is in accord with model of phase distribution. It was discussed the effect of acidity, concentration of acidic chrome blue K, ion strength to apparent binding constant K<sub>a</sub>, binding number n, Sandell constant. The reaction time, surfactant, work curve were studied.

L30 ANSWER 18 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:354810 HCPLUS Full-text

DOCUMENT NUMBER: 137:172059

TITLE: Study on thermal stability of endothermic hydrocarbon fuels for hypersonic propulsion. II. Autoxidation mechanism and additives evaluation

AUTHOR(S): Fan, Qi-ming; Mi, Zhen-tao; Yu, Yan;

CORPORATE SOURCE: School of Chemical Engineering and Technology, Tianjin University, Tianjin, 300072, Peop. Rep. China

SOURCE: Ranlioxue Xuebao (2002), 30(2), 167-170

PUBLISHER: CODEN: RNXUDB; ISSN: 0253-2409

DOCUMENT TYPE: Kexue Chubanshe

LANGUAGE: Chinese

AB Additives and additive packages were evaluated as the most effective and economical measures to improve the thermal stability of jet fuels, after an anal. of the autoxid. mechanism of fuels under thermal oxidative stress testing as well as testing of detergent-dispersant and metal deactivators. A new type of detergent-dispersant called as pentaerythritol ester of polyisobutylene phosphoric acid (PETA) is synthesized, and its structure was analyzed by FT-IR and NMR to give the reaction processes. The effects of additives and additive package containing antioxidant (A), detergent-dispersant (D) and metal deactivator (M) in reducing thermal oxidation deposit were studied. The result showed that the inhibitive effect order is AMD > MD > A. Overall, the detergent-dispersant is the dominant

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additive, and all combinations containing it exhibit the significant improvement in thermal stability based on deposit criterion. The greatest improvement in reducing deposit (improving thermal stability) occurred with the use of the three-additive combination. The deposit amounts were reduced by 87.10%, 90.91%, and 89.12% in RP-3 (conventional jet fuel), MCH (methylcyclohexane), and THDCPD (tetrahydrodicyclopentadiene), resp. PETPA shows a greater effect on reducing deposits than T-154 (surfactant) used either single or together.

L30 ANSWER 19 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2002:948778 HCAPLUS Full-text  
DOCUMENT NUMBER: 138:179852  
TITLE: Determination of nickel using dual - wavelength increasing sensitivity method with a new reagent 8Q55AC  
AUTHOR(S): Zhou, Qiu-yun; Yu, Ying  
CORPORATE SOURCE: Department of Chemistry, South China Normal University, Canton, 510631, Peop. Rep. China  
SOURCE: Huanan Shifan Daxue Xuebao, Ziran Kexueban (2002), (3), 100-102  
CODEN: HSDZER; ISSN: 1000-5463  
PUBLISHER: Huanan Shifan Daxue  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB A new method for determination of Nickel using 2-(8-hydroxyquinolino-5-sulfonicacid-7-azo)-1,9-dihydroxy-3,6-naphthalene disulfonic acid is studied. In pH 9.37 B-R media, Nickel and 8Q55AC react to form a 1:3 complex, using surface active agent CTAB for sensitivity enhancement. The maximum absorbance of the reagent is 692 nm, the complex is 542 nm, and the apparent molar absorptivity is 6.0 + 104 L mol<sup>-1</sup> cm<sup>-1</sup>. Beer's law is obeyed by in 0 .approx. 20  $\mu$ g 25 mL for Nickel. The sensitivity increased by 2.5 times in contrast with using single wavelength. The method is applied to the determination of Nickel in actual samples with satisfactory results.

L30 ANSWER 20 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2002:6465 HCAPLUS Full-text  
DOCUMENT NUMBER: 136:114951  
TITLE: Application and investigation of the reaction between arsenazo III-Ytterbium(III) and bovine serum albumin  
AUTHOR(S): Yu, Ying; Huang, Fad; Gao, Qing  
CORPORATE SOURCE: South China Normal Univ., Canton, 510631, Peop. Rep. China  
SOURCE: Fenxi Huaxue (2001), 29(10), 1205-1208  
CODEN: PHHHD; ISSN: 0253-3820  
PUBLISHER: Zhongguo Huaxuehui "Fenxi Huaxue" Bianji  
WEIYUANHUI  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB The interaction between arsenazo III-Ytterbium(III) and bovine serum albumin (BSA) was investigated. When BSA was added into arsenazo III-Yb(III) solution at pH 2.48, bathochromic effect and hypochromicity were observed. With the increase in BSA concentration, the absorption peak at 650 nm decreased strikingly. A spectrophotometric method for the determination of protein was established by using arsenazo III-Yb(III) complex, the determination result obtained by this method agreed well with that by UV method in real samples. The influences of exptl. conditions on the determination were also discussed. The interaction of arsenazo III - Yb(III) and BSA was in accord with the

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scatchard model. It was found that the effect of BSA on the spectrum of arsenazo III-Yb(III) was similar to that of cationic surfactant.

L30 ANSWER 21 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6  
ACCESSION NUMBER: 2001:978938 HCAPLUS Full-text  
DOCUMENT NUMBER: 134:248947  
TITLE: Advances in sample preparation in electromigration, chromatographic and mass spectrometric separation methods  
AUTHOR(S): Gilar, M.; Bouvier, E. S. P.; Compton, B. J.  
CORPORATE SOURCE: Waters Corp., Milford, MA, 01757, USA  
SOURCE: Journal of Chromatography, A (2001), 909(2), 111-135  
CODEN: JCRAEY; ISSN: 0021-9673  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English  
AB The quality of sample preparation is a key factor in determining the success of anal. of pharmaceutically important compds. in biol. matrixes. This has driven forward the development of sample clean-up procedures in last 20 yr, today's chemists face an addnl. challenge: sample preparation and anal. of complex biol. samples for characterization of genotypic or phenotypic information contained in DNA and proteins. This review, with 226 refs., focuses on various sample pretreatment methods designed to meet the requirements for the anal. of biopolymers and small drugs in complex matrixes. The authors discuss the advances in development of solid-phase extraction (SPE) sorbents, online SPE, membrane-based sample preparation, and sample clean-up of biopolymers prior to their anal. by mass spectrometry.  
REFERENCE COUNT: 226 THERE ARE 226 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 22 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:351056 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:368778  
TITLE: Study on the reaction between calconcarboxylic acid and bovine serum albumin  
AUTHOR(S): Huang, Fa-de; Yu, Ying; Jiang, Xiong  
CORPORATE SOURCE: Dep. Chem., South China Normal Univ., Canton, 510631, Peop. Rep. China  
SOURCE: Huanan Shifan Daxue Xuebao, Ziran Kexueban (2001), (1), 88-92  
CODEN: HSDZER; ISSN: 1000-5463  
PUBLISHER: Huanan Shifan Daxue  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB The interaction of Calconcarboxylic Acid (CCA) and bovine serum albumin (BSA) was investigated by using spectrophotometric method and equilibrium dialysis method in acidic solution (pH 4.47). It is suggested that the hydrophobic force is the main binding force. The model of phase distribution is appropriate in the treatment of data obtained here. The effect of surface active agent to the interactional system is discussed. It is found that the effects of BSA on the spectrum of CCA were similar to that of cationic surfactant. The influences of exptl. conditions on the interaction were also discussed.

L30 ANSWER 23 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7

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10/516418  
ACCESSION NUMBER: 2000:824508 HCAPLUS Full-text  
DOCUMENT NUMBER: 134:2339  
TITLE: Destructible surfactants and uses thereof  
INVENTOR(S): Lee, Peter Jeng Jong; Compton, Bruce J.  
PATENT ASSIGNEE(S): Waters Investments Ltd., USA  
SOURCE: PCT Int. Appl., 50 pp.  
CODEN: PIXX02  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:  
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PATENT NO. KIND DATE APPLICATION NO. DATE  
WO 2000070334 AI 20001123 WO 2000-US13028 20000512  
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,  
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,  
IS, JP, KE, KG, KR, KZ, LC, LR, LS, LT, LU, LV, MD,  
MG, MK, MN, MM, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK,  
SL, TJ, TM, TR, TT, UA, US, US, VN, YU, ZW, AM, AZ, BY,  
KG, HZ, MD, RU, TJ, TR  
GW, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,  
BJ, CF, CG, CI, CM, GA, GN, GW, MD, MR, NE, SN, TD, TG  
AU 2000048435 A5 20001205 AU 2000-48435 20000512  
EP 1181537 A1 20020227 EP 2000-930651 20000512  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO  
PRIORITY APPLN. INFO.: US 1999-134113P P 19990514  
WO 2000-US13028 W 20000512

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CN 1273427 A 20001115 CN 1999-107243 19990511  
PRIORITY APPLN. INFO.: CN 1999-107243 19990511  
AB The apparatus consists of reactive furnace, electrothermal pipe, stirrer, insulating jacket, infusion pump, storage tank for carbonyl metal, oil carrier and surfactant feeding pipe, protective gas feeding pipe, tail gas discharging pipe, and thermometer. The ferrofluid is prepared by adding carbonyl metal to hot oil carrier containing surfactant, and decomposing at 120-250° for 3-20 h. The oil carrier is mineral oil,  $\alpha$ -olefin synthetic oil, or silicone oil. The surfactant is oleic acid, Ba sulfonate, inime, or silane coupling agent.

10/516418  
ACCESSION NUMBER: 2001:244371 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:1935  
TITLE: Microreactor-controlled selectivity in organic photochemical reactions  
AUTHOR(S): Tung, Chen-Ho; Wu, Li-Zhu; Zhang, Li-Ping; Li, Hong-Ru; Yi, Xiu-Yu; Song, Kai; Xu, Ming; Yuan, Zhen-yu; Guan, Zhen-Yu; Guan, Jing-Qi; Wang, Hong-Wei; Ying, Yun-Ming; Xu, Xiao-Hu  
CORPORATE SOURCE: Institute of Photographic Chemistry, Chinese Academy of Sciences, Beijing, 100101, Peop. Rep. China  
SOURCE: Pure and Applied Chemistry (2000), 72(12), 2289-2298  
CODEN: PACHAS; ISSN: 0033-4545  
PUBLISHER: International Union of Pure and Applied Chemistry  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English  
AB Mol.-size zeolites, Nafion membranes, low-d. polyethylene films, and mixed surfactant vesicles have been used as microreactors to carry out organic photochem. reactions. The photocycloaddns. of diaryl compds. with long flexible chains included in NaY zeolite or low-d. polyethylene films yield intramol. photocyclomers to the exclusion of intermol. products. The photosensitized oxidation of alkenes included in pentasil zeolites or Nafion membranes or vesicles can be directed selectively toward either the singlet oxygen-mediated or the superoxide radical anion-mediated products by controlling the status and location of the substrate and sensitizer mol. in the reaction media. The photo-Fries rearrangement of Ph phenylacetates included within NaY and pentasil zeolites or Nafion membranes gives either ortho-hydroxyphenones or decarbonylation products depending on the size/shape of the microreactors and the substrate mol. All these results demonstrate the utility of microreactors to control the product selectivity in organic photochem. reactions. A review with 8 refs.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/516418  
ACCESSION NUMBER: 2000:851934 HCAPLUS Full-text  
DOCUMENT NUMBER: 134:185788  
TITLE: Microreactor-controlled selectivity in organic photochemical reactions  
AUTHOR(S): Wu, Li-zhu; Zhang, Li-ping; Li, Hong-ru; Yi, Xiu-yu; Song, Kai; Xu, Ming; Yuan, Zhen-yu; Guan, Jing-qu; Ying, Yun-ming; Wang, Hong-wei; Tong, Zhen-he; Tung, Chen-ho  
CORPORATE SOURCE: Institute Photographic Chemistry, Chinese Academy

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SOURCE: Sciences, Beijing, 1000101, Peop. Rep. China  
Gangguo Xue Yu Guang Huaxue (2000), 18(4), 348-356

PUBLISHER: CODEN: GKKHE9; ISSN: 1000-3231

DOCUMENT TYPE: Kexue Chubanshe  
LANGUAGE: Journal; General Review  
Chinese

AB A review with 10 refs. Mol.-sieves zeolites, Nafion membranes, low-d. polyethylene films and mixed surfactant vesicles were used as microreactors to control the product selectivity in organic photochem. reactions. The photocyclomers of diaryl compds. with long flexible chains included in NaY zeolite or low-d. polyethylene films yield intramol. photocyclomers to the exclusion of intermol. products. The photosensitized oxidation of alkenes included in pentasil zeolite or Nafion membrane or vesicles can be directed selectively towards either the singlet oxygen mediated or the superoxide radical anion mediated products by controlling the status and location of the substrate and sensitizer mols. in the reaction media. Long-lived photoinduced charge-separation in Ru (bpy)32+/viologen system at Nafion membrane-solution interface was achieved.

L30 ANSWER 27 OF 45 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:99687 SCISEARCH Full-text

THE GENUINE ARTICLE: 2791Q

TITLE: Effects of ramipril on cardiovascular and microvascular outcomes in people with diabetes mellitus: results of the HOPE study and MICRO-HOPE substudy

AUTHOR: Gerstein H C (Reprint); Yusuf S; Mann J F E; Hoogwerf B; Zinman B; Held C; Fisher M; Wolffenbuttel B; Bosch J; Richardson L; Pogue J; Helle J P; Yusuf S; Sleigh P; Dagenais G; Montague T; Bosch J; Pogue J; Taylor W; Sardo L; Arnold M; Baigrie R; Davies R; Gerstein H; Jha P; Johnston D; Joyner C; Kuznetzky R; Lonn E; Mitchell B; Morris A; Sussek B; Teo K; Tsuyuki R; Zinman B; Probstfield J; Young J; Diaz R; Paolasso E; Avezum A; Piegas L; Mann J; Wolffenbuttel B; Ostergren J; Meaney E; Aprile M; Bedard D; Cossett J; Ewart G; Harris L; Kellen J; LaForge D; Magi A; Skanes J; Squires P; Stevens K; Bosch J; Cherian F; Holodny I; Kalkbrenner P; Lonn E; Mazur P; McQueen M; Micks M; Monti S; Pogue J; Sardo L; Thompson K; Westfall L; Yusuf S; Richardson L; Raw N; Genisius M; Diaz R; Paolasso E; Avezum A; Piegas L; Gerstein H; Zinman B; Dagenais G; Arnold M; Auger P; Avezum A; Bata I; Bernstein V; Bourassa M; Diaz R; Fisher B; Gerstein H; Grover J; Gun C; Gupta M; Held C; Hoeschen R; Kous Z; Lonn E; Mann J; Mathew J; Meaney E; Meldrum D; Pilon C; Ramos R; Roccaforte R; Starra R; Trivi M; Davies R; Johnston D; Lonn E; Probstfield J; McQueen M; Sackett D; Collins R; Davis E; Furberg C; Hennekens C; Pitt B; Turner R; Braver J; Cuneo C; Diaz M; Dizeo C; Guzman L; Lipschitz S; Llanos S; Lopez J; Lorenzatti A; Machado R; Mackey C; Mancini M; Marino M; Martinez F; Matrone A; Nordeby R; Orlandini A; Romero G; Ruiz M; Ruscello M; Saavedra S; San Damaso J; Serra J; Tuero E; Zapata G; Zavala A; Grisold M; Klein W; Brosch E; Baumanns P; Brusselmann H; Bodson A; Boland J; Cano J; Chaudron J M; Degaute J

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P; Duprez D; Heyndrickx G; Krzentowski G; Mockett J; Wautrecht J; Alexandre E; Amodeo C; Armanagaijan C; Ayub J; Bertolami M; Bodanese L; Borges J; Caramelli B; Carvalho A; Coelho O; Dioguardi G; Faludi J; Fischino J; Fischino G; Guedes A; Kadri T; Kawamura T; Lebrunis A; Melheiros F; Marafon L; Nakamura M; Nonohay N; Ogawa C; Pavanello R; Puech-Leao P; Ramires F; Ramires L; Sampaio M; Sariva L; Savioli F; Seixas A; Shibata M; Souza A; Tanajura L; Ueti O; Vitalo D; Armstrong F; Armstrong W; Baptista B; Basinger M; Bell N; Beresford P; Black W; Brass N; Brown M; Brown K; Brownoff R; Chaytor C; Cottier W; Donnelly R; Dzavik V; Edwards A; Felker P; Giannoccaro P; Goeres M; Greenwood P; Grossi M; Grossman L; Gulamhussein S; Hui W; Hutchison F; Irving A; Kesian L; Kasza L; Korner L; Kvill L; Lekhani Z; Lam S; Lesoway R; Ma P; Martinez V; Meldrum D; Mitchell B; Mitchell D; Montague T; Musseau A; Muzyka T; Neffgen C; Neffgen J; Nichol R; O'Beirne M; Paridis J; Peterson D; Plesko A; Prosser A; Radomsky N; Roth D; Ryan E; Seneratne M; Simon M; Stenerson P; Stone J; Talib J; Wedel R; Wyse D; Altwasser F; Ashton T; Askew J; Bernstein V; Bishop W; Bloomberg G; Boone J; Breakwell L; Buller L; Calvert K; Carsen G; Dahl M; Dawson K; Dodak A; Dufton J; Geddis R; Ghosh S; Heath J; Hilton D; Imrie J; Jay D; Kiess M; Klinke P; Kornder J; Lee P; Leong W; Lewis J; Lounsbury N; MacDonald L; MacDonald K; MacNeil A; MacHitchie D; McGee L; Mitchell L; Mulcahy K; O'Donoghue S; Pearce A; Perreault L; Polasek P; Rabkin S; Reilly M; Richardson P; Scofford E; Sweeney R; Terrell M; Thompson C; Wagner K; Webb J; Wedding K; Woo K; Wright M; Zutt A; Bridi L; Hoeschen R; Mehta P; Mohammed I; Ong A; Ong G; Bessoudo R; O'Brian L; Mclellan L; Milton J; Elgar F; Joyce C; O'Keefe D; Parsons M; Revelle M; Sherman G; Smith R; Worrall G; Atkinson A; Barnhill S; Bata I; Crossman L; Folkins D; Hatchway R; Johnson B; MacFarlane M; MacNeil T; Morash J; Sheridan W; Shirley M; Anderson I; Arnold M; Baigrie R; Baird M; Batta T; Barnie A; Basta M; Blakely J; Bozek B; Bradley W; Brown K; Burnham G; Cameron W; Cann M; Carroll S; Carter R; Chan N; Chan Y; Charles J; Cheung M; Chinn C; Cleghorn L; Curnow G; Curraido P; Davies R; DeGagne S; DeYoung P; Dhaliali R; Dowell H; Drobac M; Dubbins J; Duffield K; Edmonds M; Fallon E; Feldman D; Fell D; Ferguson C; Finkelstein L; Fong G; Fowlis R; Fraser M; Frenette P; Fulop J; Glaes A; Goode E; Gupta M; Hanne A; Harris K; Hess A; Hierlihy P; Houlden R; Hramiak I; Hrycynych B; Iwanochko R; Janzen I; Kannampuzha P; Keely E; Kennedy R; Kenshole A; Kent E; Khan S; Kostuk M; Kowaleksi M; Krupka M; Kumar G; Kuruvilla G; Kwok K; Lei C; Langer A; Leor J; Lau D; LeValley T; Lent B; Liu P; Lochnan H; Lovell M; Lowe D; Mabb T; Maclean S; Man K; Marois L; Massel D; Matthews E; McManus R; McPhee E; McQueen M; McSherry J; Miller D; Miller F; Miners L; Misterski J; Moes G; Mulaisho C; Munoz C; Nawaz S; Noseworthy C; O'Keefe M; Oosterveld L; Panju A; Paquette H; Parkovnick M; Peterson R; Pflugfelder P; Powers S; Rebane T; Redda A; Reeves E; Ricci J; Sasson Z; Sayles M; Scott M;

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Sibbick M; Singh N; Southern R; Spence D; Sternberg L; Stewart J; Styling S; Sullivan B; Sullivan M; Sullivan M; Swan J; Taichman J; Tan K; Tanser P; Tartaglia C; Taylor K; Thomson D; Turck M; Vakanji T; vanMalwaven A; Varey M; Verker R; Walters J; Weeks A; Weinert M; Wetmore S; Whitsett P; Willing J; Wilson C; Wilson J; Wissenberg G; Wolfe M; Wolter B; Yao L; Costain G; Hickey E; MacMillan E; Aris-Jilwan N; Auger P; Banville P; Beaudoin J; Belanger A; Belanger N; Belleville L; Bilondeau N; Bogaty P; Boulianne M; Bourassa M; Brophy J; Brouillette M; Buitenhuis J; Calve C; Campeau J; Carmichael P; Carrier S; Chiasson J; Couto B; Couto D; Croteau S; D'Amours G; Dagenais N; Delage F; Deschamps J; Diori D; Douville Y; Dumont F; Dupuis R; Frechette L; Gauthier S; Gervais P; Cigare G; Giroux R; Gossard D; Gosselin G; Goulet G; Grondin P; Heile J; Henri L; Houde G; Joyal M; Kandalasit N; Karabatsos A; Kiwan G; Kous Z; Labbe R; Langlais M; Lauzon C; Leblanc M; Lenis J; Leroux S; Loisel R; MacLeanian K; Morissette A; Noel H; Ouimet F; Pedneault L; Fiche J; Pilon C; Flourde P; Poirier C; Poisson D; Primeau L; Pruneau G; Remillard C; Roberge B; Robert M; Rodriguez M; Roy C; Roy L; Ruel M; Samson M; Saulnier D; Savard D; Serfaty P; Sestier F; Smolovitch M; Starra R; St-Hilaire R; Theroux P; Toupin-Halle A; Tremblay J; Truchen H; Turcotte J; Vachon S; Vienneau R; Wilson P; Habib M; Habib M; Ahmed S; Hart M; Walker J; Walker M; Thomase G; Meunier L; Sayeed Z; Juhi H; Kolendork H; Hamalainen T; Gin H; Rigellou V; Bohm H; Erdmann E; Forst P; Gordal A; Hampel R; Hartmann C; Hasslacher G; Henrichs H; Hensen J; Hof P; Kromer E; Martin T; Maus J; Mayer B; Miedlich S; Moeller A; Nast H; Oehmen-Britsch R; Paschke R; Prehn B; Rieger G; Riel R; Rosak C; Schroeder C; Schulze-Schleppinghoff B; Schunkert H; Schweda R; Stabein A; Stein U; Truchon H; Under H; Wetzel H; Crean P; White U; Aina P; Balzan C; Barberesi F; Brancaloni R; Brunazzi M; Brunelli C; Cambiano A; Caponetto S; Casaccia M; Centofanti P; Cernigliaro C; Goi A; Cicciarello C; Cotogni A; DeJonckheer U; Dellavesa P; di Gerogio L; Di Luzio S; Fava A; Frigeni G; Gatto E; Giani P; Giorgi-Pierfranceschi D; Imparato C; Landoni M; Magnani B; Manicardi E; Mantovani B; Marini M; Martini U; Mazzantini S; Merni M; Miglierina E; Marini M; Molinari G; Nanni D; Paciaroni E; Pareschi P; Pasqualini M; Perazzoli F; Polese A; Poletti F; Portioli I; Provasoli S; Repetto S; Rigatelli G; Roccaforte R; Romano E; Rossi E; Rugolotto M; Rusticelli F; Saccamanno G; Simoni C; Stucci N; Terranova P; Tortul C; Valusci M; Vincenzi M; Vincenzi P; Zavaroni D; Cardona-Munoz E; Elizondo L; Fausto M; Galindo R; Gloria-Breceda F; Hernandez-Garcia M; Ibarra-Flores M; Illescas-Diaz J; Lopez-Alvarado A; Meaney E; Olvera-Ruiz R; Rivera-Capello J; Romero-Soltero M; Samaniego-Mendes V; Vidrio-Velazquez M; Kruseman A; Mulder H; Sels J; van Doorn L; Vogel N; Hjerkinn E; Reikwan A; Albert X; Alvarez A; Cardona M; Cosio F; Gilabert R; Karoni A; Lopez-Bescos L; Masia R; Saenz L; Sanz G; Ahnberg K; Andersson D; Andersson O; Astrom L; Bergsten L; Bjorkman H; Borgman C; Cervin

CORPORATE SOURCE:

COUNTRY OF AUTHOR: SOURCE:

PUBLISHER: DOCUMENT TYPE:

LANGUAGE:

REFERENCE COUNT:

ENTRY DATE:

Entered STN: 2000

Last Updated on STN: 2000

AB

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*  
Background Diabetes mellitus is a strong risk factor for cardiovascular and renal disease. We investigated whether the angiotensin-converting-enzyme (ACE) inhibitor ramipril can lower these risks in patients with diabetes.

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Methods 3577 people with diabetes included in the Heart Outcomes Prevention Evaluation study, aged 55 years or older, who had a previous cardiovascular event or at least one other cardiovascular risk factor, no clinical proteinuria, heart failure, or low ejection fraction, and who were not taking ACE inhibitors, were randomly assigned ramipril (10 mg/day) or placebo, and Vitamin E or placebo, according to a two-by-two factorial design. The combined primary outcome was myocardial infarction, stroke, or cardiovascular death. Overt nephropathy was a main outcome in a substudy. Findings The study was stopped 6 months early (after 4.5 years) by the independent data safety and monitoring board because of a consistent benefit of ramipril compared with placebo. Ramipril lowered the risk of the combined primary outcome by 25% (95% CI 12-36,  $p=0.0004$ ), myocardial infarction by 22% (6-36), stroke by 33% (10-50), cardiovascular death by 37% (21-51), total mortality by 24% (8-37), revascularisation by 17% (2-30), and overt nephropathy by 24% (3-40,  $p=0.027$ ). After adjustment for the changes in systolic (2.4 mm Hg) and diastolic (1.0 mm Hg) blood pressures, ramipril still lowered the risk of the combined primary outcome by 25% (12-36,  $p=0.0004$ ). Interpretation Ramipril was beneficial for cardiovascular events and overt nephropathy in people with diabetes. The cardiovascular benefit was greater than that attributable to the decrease in blood pressure. This treatment represents a vasculoprotective and renoprotective effect for people with diabetes.

L30 ANSWER 28 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:192639 HCAPLUS Full-text  
DOCUMENT NUMBER: 134:315702  
TITLE: Determination of copper using dual-wavelength sensitivity enhancing method with a new reagent 8058AH  
AUTHOR(S): Long, Chao-ying; Yu, Ying  
CORPORATE SOURCE: Dep. Chem., South China Normal Univ., Canton, 510631, Peop. Rep. China  
SOURCE: Huinan Shifan Daxue Xuebao, Ziran Kexueban (2000), (4), 63-66  
CODEN: HSDZER; ISSN: 1000-5463  
PUBLISHER: Huinan Shifan Daxue  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB A method for determination of Cu using 2-(8'-hydroxy quinoline-5'-sulfoacid-azo)-1-hydroxy-8-amino-3,6-naphthalene disulfonic acid is presented. At pH 9.23 of NH4Cl/NH3·H2O media, Cu and 8058AH react to form a 1:6 complex, and the surface active agent DBS increases sensitivity. The maximum absorbance of the reagent is 640 nm; the complex is 540 nm; the apparent molar absorptivity is  $2.9 \times 10^4$  L·mol<sup>-1</sup>·cm<sup>-1</sup> using the dual-wavelength increasing sensitivity method. Beer's law is obeyed at 0-35  $\mu$ g Cu/25 mL. The method is applied to the determination of Cu in actual samples with satisfactory results.

L30 ANSWER 29 OF 45 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
ACCESSION NUMBER: 1999:304835 BIOSIS Full-text  
DOCUMENT NUMBER: PREV199900304835  
TITLE: A novel SDS analog compatible with PAGE and MS analysis of proteins and peptides.  
AUTHOR(S): Brown, E. R. [Reprint author]; Lee, J. J. [Reprint author]; Herbert, R. G. [Reprint author]; Ding, J. [Reprint author]; Bouvier, E. S. P. [Reprint author]; Livingstone, J. [Reprint author];

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10/516418  
LANGUAGE: Chinese  
AB This paper sets up a new method for determination of Zinc using 2-(8'-hydroxyquinoline-5'-sulfoazo)-1-hydroxy-8-amino-3,6-naphthalene disulfonic acid. In pH 9.8 NH4Cl/NH3 media Zinc and 8058AH react to form a 1:2 complex and its spectrophotometric sensitivity could be enhanced by using surfactant CPE. The maximum absorbance of the reagent is 672 nm, the complex is at 573 nm, the apparent molar absorptivity is  $5.2 \times 10^4$  L·mol<sup>-1</sup>·cm<sup>-1</sup>. Beer's law is obeyed by 0 .apprx. 35  $\mu$ g Zn/25 mL for Zinc. The method is applied to the determination of Zinc in samples with satisfactory results.

L30 ANSWER 32 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1998:699875 HCAPLUS Full-text  
DOCUMENT NUMBER: 130:17304  
TITLE: Combining ELISA, RP-HPLC, and SDS-PAGE to define the potency of a complex biologic  
AUTHOR(S): Zabrecky, James R.; Brown, Elizabeth K.; Compton, Bruce J.; Kretschmer, Matthias W.; Fowler, Elizabeth; Bernady, J. D.  
CORPORATE SOURCE: AutoImmune Inc., Lexington, MA, 02139, USA  
SOURCE: Pharmaceutical Technology (1998), 22(10), 36,38,40-45  
CODEN: PTECDN; ISSN: 0147-8087  
PUBLISHER: AdvaStar Communications, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB A therapeutically relevant potency assay is an essential requirement in drug development. It must be able to quantify dose, ensure product consistency, and quantify immunol. activity. The strategy described here suggests a validatable approach to defining the potency of a complex biol.

L30 ANSWER 33 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN  
ACCESSION NUMBER: 1998347898 EMBASE Full-text  
TITLE: Combining ELISA, RP-HPLC, and SDS-PAGE to define the potency of a complex biologic.  
AUTHOR: Zabrecky J.R.; Brown E.K.; Compton B.J.; Kretschmer M.W.; Fowler E.; Bernady J.D.  
CORPORATE SOURCE: J.R. Zabrecky, AutoImmune Inc., 128 Spring St., Lexington, MA 02139, United States, zabrecky@erols.com  
SOURCE: Pharmaceutical Technology, (1998) Vol. 22, No. 10, pp. 36+38+40-45. .  
Refs: 7  
ISSN: 0147-8087 CODEN: PTECDN  
COUNTRY: United States  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 037 Drug Literature Index  
039 Pharmacy  
LANGUAGE: English  
ENTRY DATE: Entered STN: 12 Nov 1998  
Last Updated on STN: 12 Nov 1998  
DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L30 ANSWER 34 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 11  
ACCESSION NUMBER: 1998:699204 HCAPLUS Full-text  
DOCUMENT NUMBER: 130:115084  
TITLE: Combining ELISA, RP-HPLC, and SDS-PAGE to define the potency of a complex biologic  
AUTHOR(S): Zabrecky, James R.; Brown, Elizabeth K.;

10/516418  
Compton, B. J. [Reprint author]  
CORPORATE SOURCE: Waters Corporation, Milford, MA, USA  
SOURCE: FASEB Journal, (April 23, 1999) Vol. 13, No. 7, pp. A1478, print.  
Meeting Info: Annual Meeting of the American Societies for Experimental Biology on Biochemistry and Molecular Biology 99, San Francisco, California, USA, May 16-20, 1999. American Societies for Experimental Biology.  
CODEN: FAJOC. ISSN: 0892-6638.  
DOCUMENT TYPE: Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)  
LANGUAGE: English  
ENTRY DATE: Entered STN: 12 Aug 1999  
Last Updated on STN: 12 Aug 1999

L30 ANSWER 30 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 10  
ACCESSION NUMBER: 1998:694669 HCAPLUS Full-text  
TITLE: A novel synthetic strategy to aromatic-diisocyanate-based waterborne polyurethanes  
AUTHOR(S): Wei, Xin; Jing, Yan; Yu, Xuehai  
CORPORATE SOURCE: Department of Polymer Science and Engineering, College of Chemistry and Chemical Engineering, Nanjing University, Nanjing, 210093, Peop. Rep. China  
SOURCE: Journal of Applied Polymer Science (1998), 70(8), 1621-1626  
CODEN: JAPNAB; ISSN: 0021-8995  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Based on aromatic diisocyanate (e.g., 2,4-tolylene diisocyanate (TDI)), a novel synthetic strategy to waterborne polyurethanes was introduced. Ionized polyoxyethylated amine (NPGO) played an important role in the preparation process as both a polyether soft segment and an internal emulsifier. First, a segmented surfactant prepolymer was synthesized. Second, the prepolymer was charged to a water dispersion of a hydrophobic polyol (e.g., polytetrahydrofuran (PTMO)) directly to obtain a stable emulsion. Thirs, a chain-extension procedure was performed directly in water with PTMO to achieve a stable aqueous polyurethane dispersion. Neither aliphatic diisocyanate nor excess isocyanate group fraction was added. An extra end-capping reaction or external emulsifier was also unnecessary. Films cast from emulsions exhibited reasonable mech. properties.  
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 31 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1999:373675 HCAPLUS Full-text  
DOCUMENT NUMBER: 131:82251  
TITLE: Determination of Zinc using dual-wavelength sensitivity enhancing method with a new reagent 8058AH  
AUTHOR(S): Yu, Ying  
CORPORATE SOURCE: Dept. of Chemistry, South China Normal University, Canton, 510631, Peop. Rep. China  
SOURCE: Huinan Shifan Daxue Xuebao, Ziran Kexueban (1998), (2), 52-53  
CODEN: HSDZER; ISSN: 1000-5463  
PUBLISHER: Huinan Shifan Daxue  
DOCUMENT TYPE: Journal

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10/516418  
Compton, Bruce J.; Kretschmer, Matthias W.; Fowler, Elizabeth; Bernady, J. D.  
CORPORATE SOURCE: AutoImmune Inc., Lexington, MA, 02139, USA  
SOURCE: BioPharm (Eugene, Oregon) (1998), 11(10), 30-34  
PUBLISHER: AdvaStar Communications, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB A therapeutically relevant potency assay is an essential requirement in drug development. It must be able to quantify dose, ensure product consistency, and quantify immunol. activity. The strategy described here suggests a validatable approach to defining the potency of a complex biol.  
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 35 OF 45 MEDLINE on STN DUPLICATE 12  
ACCESSION NUMBER: 1998363468 MEDLINE Full-text  
DOCUMENT NUMBER: PubMed ID: 9699888  
TITLE: HMG-CoA reductase and ACAT inhibitors act synergistically to lower plasma cholesterol and limit atherosclerotic lesion development in the cholesterol-fed rabbit.  
AUTHOR: Bocan T M; Mueller S B; Brown E Q; Lee F; Bocan M J; Rea T; Pape M E  
CORPORATE SOURCE: Department of Vascular and Cardiac Diseases, Parke-Davis Pharmaceutical Research, Division of Warner Lambert Company, Ann Arbor, MI 48105, USA.. bocant@wpi.wl.com  
SOURCE: Atherosclerosis, (1998 Jul) Vol. 139, No. 1, pp. 21-30. Journal code: 0242543. ISSN: 0021-9150.

PUB. COUNTRY: Ireland  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199810  
ENTRY DATE: Entered STN: 29 Oct 1998  
Last Updated on STN: 29 Oct 1998  
Entered Medline: 22 Oct 1998

AB Given the beneficial effects of HMG-CoA reductase and ACAT inhibitors on hypercholesterolemia and atherosclerosis, we hypothesized that coadministration would improve the hypolipidemic response and not only limit lesion development but also alter the cellular composition of atherosclerotic lesions so as to induce a stable atherosclerotic lesion morphology. Plasma total cholesterol exposure was reduced 29 and 39% with atorvastatin (2.5 mg/kg) and CI-976 (5 mg/kg), respectively, and 60% upon coadministration due primarily to reductions in VLDL-cholesterol. Modest changes in liver cholesterol ester (CE) content were observed with atorvastatin or CI-976; however, a striking 48% reduction was noted upon coadministration. Liver HMG-CoA reductase mRNA levels were reduced 73% by cholesterol feeding and drug treatment did not prevent the reduction; however, atorvastatin alone and upon coadministration blunted the decrease in LDL receptor mRNA levels. The CE content of the iliac-femoral was unaffected by atorvastatin but was reduced 35% by CI-976 and 53% upon coadministration. Thoracic aortic CE content was reduced 38% by atorvastatin, 48% by CI-976 and 80% upon coadministration. Iliac-femoral lesion and macrophage area were reduced 48 and 67% by atorvastatin, respectively, and 68 and 81% by CI-976 but upon coadministration only an 85% reduction in macrophage area was noted. Aortic arch cross-sectional lesion and macrophage area were unaffected by atorvastatin, decreased 72-80% by CI-976 and reduced 87-92% upon coadministration. We

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conclude that inhibition of HMG-CoA reductase and ACAT acts synergistically to lower plasma total and lipoprotein cholesterol levels and to limit the development of atherosclerotic lesions in the cholesterol-fed rabbit by presumably regulating cholesterol trafficking pathways within liver and vascular cells.

L30 ANSWER 36 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 13

ACCESSION NUMBER: 1996:331956 HCAPLUS Full-text

DOCUMENT NUMBER: 125:18496

TITLE: Combined absorption and self-decomposition of ozone in aqueous solutions with interfacial resistance

AUTHOR(S): Chang, C. Y.; Chiu, C. Y.; Lee, S. J.; Huang, W. H.; Yu, Y. H.; Liou, H. T.; Ku, Y.; Chen, J. N.

CORPORATE SOURCE: Graduate Inst. Environmental Eng., National Taiwan Univ., Taiwan

SOURCE: Ozone: Science &amp; Engineering (1996), 18(2), 183-194

CODEN: 0ZSEDS; ISSN: 0191-9512

PUBLISHER: Lewis

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A theor. anal. is performed employing the film model for the isothermal absorption and self-decomposition of ozone in aqueous solns. with interfacial resistance, which is inversely proportional to the interfacial mass transfer coefficient,  $k_s$ . A closed-form solution has been obtained. The effects of system parameters on the ozone mass transfer rate are examined. These parameters include the interfacial resistance ( $1/k_s$ ), the acidic and basic self-decomposition reaction rate parameters ( $Mm0.5, Mn0.5; Mm = (2DAkmAim-1/(m-1))/(kL0)2, Mn=(2DAkmAin-1/(m-1))/(kL0)2$ ), the reaction orders ( $m, n$ ), the pH value of the solution, and the liquid-phase mass transfer coefficient ( $kL0$ ). The results indicate that the reduction effect of the interfacial resistance on the absorption rate is most significant for the situation with the larger values of  $Mm$  and  $Mn$  as well as with higher pH values. Also, for any particular finite value of  $kL0/k_s$ , the reduction effect encountered is greater for a gas liquid contactor with a lower  $kL0$ . The reduction effect should be avoided in order to maintain a higher mass transfer rate of ozone in aqueous solution. This anal. is of importance for the efficient use of ozone in water/wastewater treatment processes in the presence of interfacial resistance substances such as surface-active agents. For some known special cases (for example, cases with no interfacial resistance), the present solution reduces to the previous works of other investigators.

L30 ANSWER 37 OF 45 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:247881 SCISEARCH Full-text

THE GENUINE ARTICLE: UB298

TITLE: The HOPE (Heart Outcomes Prevention Evaluation) Study: The design of a large, simple randomized trial of an angiotensin converting enzyme inhibitor (ramipril) and vitamin E in patients at high risk of cardiovascular events

AUTHOR: Minden F (Reprint); Nordaby R; Ruiz M; Zavala A; Guzman L; Martinez F; Diaz R R; Mackey C; Mariano M; Romero G; Zapata G; Cuneo C; Kawamura T; Coelho O; Massayochi O; Braga J; Labrunie A; Bodanese L; Manenti E; Vitola D; Nicoule J; Amodeo C; Armanagian D;

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CORPORATE SOURCE:

COUNTRY OF AUTHOR:

SOURCE:

PUBLISHER:

DOCUMENT TYPE:

FILE SEGMENT:

LANGUAGE:

REFERENCE COUNT:

ENTRY DATE:

Entered STN: 1996

Last Updated on STN: 1996

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB OBJECTIVE: To describe the design of the HOPE (Heart Outcomes Prevention Evaluation) Study.

DESIGN: Description of the key design features of HOPE, a large, simple randomized trial of two widely applicable treatments - ramipril, an angiotensin-converting enzyme inhibitor, and vitamin E, a naturally occurring antioxidant vitamin - in the prevention of myocardial infarction, stroke or cardiovascular death. SETTING: Two-hundred and sixty-seven hospitals, physician offices and clinics in Canada, the United States, Mexico, Europe and South America.

PATIENTS: Over 9000 women and men aged 55 years and above at high risk

for cardiovascular events such as myocardial infarction and stroke were recruited over 18 months. INTERVENTIONS: A 2x2 factorial design with ramipril and vitamin E with follow-up for up to four years. CONCLUSIONS: HOPE will be one of the largest trials of two new interventions to prevent myocardial infarction, stroke or cardiovascular death in high risk patients. The results of HOPE will have direct public health impact and are likely to be readily incorporated into clinical practice. Key design features of HOPE are inclusion of individuals at high risk of cardiovascular disease, inclusion of a substantial proportion of patients with diabetes (36%) and women (27%), and detailed substudies to provide data on mechanisms of benefit.

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CANADIAN JOURNAL OF CARDIOLOGY, (FEB 1996) Vol. 12, No. 2, pp. 127-137.

ISSN: 0828-282X.

PULSUS GROUP INC, 2902 S SHERIDAN WAY, OAKVILLE ON L6J 7L6, CANADA.

ARTICLE; Journal

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Entered STN: 1996

Last Updated on STN: 1996

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Key design features of HOPE are inclusion of individuals at high risk

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patients with diabetes (36%) and women (27%), and detailed substudies to

provide data on mechanisms of benefit.

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L30 ANSWER 38 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 14

ACCESSION NUMBER: 1993:648483 HCAPLUS Full-text

DOCUMENT NUMBER: 119:248483

TITLE: Enzymic interesterification of triolein with tripalmitin in canola lecithin-hexane reverse micelles

AUTHOR(S): Marangoni, Alejandro G.; McCurdy, Robert D.; Brown, Eric D.

CORPORATE SOURCE: Dep. Food Sci., Univ. Guelph, Guelph, ON, N1G 2W1, Can.

SOURCE: Journal of the American Oil Chemists' Society (1993), 70(8), 737-44

CODEN: JAOC7; ISSN: 0003-021X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Lipase-catalyzed interesterification of tripalmitin with triolein in canola lecithin-hexane reverse micelles allowed for the successful modification of triolein and tripalmitin to yield a fat of intermediate properties between the two initial substrates. Acetone-insol. canola lecithin (AII) reverse micelles containing Rhizopus arrhizus lipase in buffer, or plain 0.1 M sodium phosphate buffer of pH 7.0, formed readily in hexane. Both had an average Stokes' radius of approx. 40 Å, as determined by quasi-elastic light-scattering detns. The reverse micelle system was stable and did not form higher-order micelle oligomers or aggregates. Biotransformation of the triglycerides was performed at 47 °C in a 50-mM AII-hexane reverse micelle system containing 50% (weight/weight) oil at a water-to-surfactant ratio (W0) of 5.5. Dynamic (oscillatory) mech. anal. indicated that the crystallization temperature of the fat dropped from 47.7 to 37.5 °C as judged by the storage (G') and loss (G'') modulus vs. temperature profiles after 48 h of reaction. Differential scanning calorimetric studies showed that the m.p. of the fat dropped from 61 to 57 °C after 48 h of reaction. Triglyceride anal. of the fat mixture by gas-liquid chromatog. (GLC) indicated that, after 48 h of reaction, the tripalmitin content dropped from 34.5 to 29% (weight/weight), the triolein content dropped from 64.5 to 52.1% (weight/weight) and the 1-oleyl-2,3-dipalmitin content reached 7.5% (weight/weight) while the 1-palmitoyl-2,3-diolein content reached 7.2% (weight/weight). 1,2-Dipalmitoyldiglyceride and 1,2-dioleyldiglyceride contents reached 1.6 and 2.4% (weight/weight), resp., after 48 h. Free fatty acid anal. of the fat mixture of GLC revealed that the free palmitic acid content increased from 0.2% to 2.4% (weight/weight) while the free oleic acid content increased from 1.4 to 5.4% (weight/weight) in the initial 24 h, after which the levels remained constant. The relatively high initial free fatty acid content of the mixture was due to free fatty acids present in the canola lecithin and not in the oils. This enzymic interesterification protocol utilizes, for the first time, an organic solvent commonly used in food processing operations and a food-grade and inexpensive surfactant that readily forms reverse micelles and yields a modified fat with improved rheol. properties for use as an edible plastic fat.

L30 ANSWER 39 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 15

ACCESSION NUMBER: 1993:164156 HCAPLUS Full-text

DOCUMENT NUMBER: 118:164156

TITLE: The dependence of the lipolytic activity of Rhizopus arrhizus lipase on surfactant concentration in Aerosol-OT/isoctane reverse micelles and its relationship to enzyme structure

AUTHOR(S): Brown, Eric D.; Yada, Rickey Y.; Marangoni, Alejandro G.

CORPORATE SOURCE: Dep. Food Sci., Univ. Guelph, Guelph, Ontario,

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SOURCE: Biochimica et Biophysica Acta, Protein Structure and Molecular Enzymology (1993), 1161(1), 66-72

DOCUMENT NUMBER: CODEN: BBAPD5; ISSN: 0167-4838

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Aerosol OT, bis(2-ethylhexyl)sodium sulfosuccinate/isoctane reverse micelles were used to investigate the dependence of the lipolytic activity of R. arrhizus lipase on surfactant concentration. Kinetic consts. for the lipolytic reaction were measured in parallel with structural studies using protein fluorescence and CD spectroscopy. Km values remained constant throughout the range of AOT concns. studied. The kcat values decreased with increasing surfactant concentration at constant water-to-surfactant ratio (W = 11) from 50 mM to 100 mM AOT, but remained constant from 100 to 200 mM AOT. These data suggested an association of the lipase with the micellar membrane. An inflection in the time-course of the reaction was found to be a function of both surfactant and substrate concns. and was likely an indication of the interfacial nature of the hydrolysis reaction. Structure prediction based on far-UV CD spectral data demonstrated structural reorganization of R. arrhizus lipase upon incorporation into reverse micelles which was characterized by a dramatic increase in  $\beta$ -sheet and overall accountable secondary structure. Other spectral changes of the lipase upon incorporation into reverse micelles included appearance of fine structure in the near-UV CD spectrum and a blue shift in the fluorescence emission maximum from 336 to 326 nm.

L30 ANSWER 40 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:70972 HCAPLUS Full-text

DOCUMENT NUMBER: 104:70972 TITLE: Analysis of the CSTR approximation under transient operation

AUTHOR(S): Huang, Y. J.; Lee, P. I.; Schwartz, J.

CORPORATE SOURCE: A.; Heydweiller, J. C. Dep. Chem. Eng. Mater. Sci., Syracuse Univ., Syracuse, NY, 13210, USA

SOURCE: Chemical Engineering Communications (1985), 39(1-6), 355-70

CODEN: CECAK; ISSN: 0098-6445

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A CSTR (continuous, stirred-tank reactor) approximation used to describe the behavior of a homogeneous reactor and a heterogeneous catalyst bed is analyzed under transient conditions. When uniformity in reactant concentration exists, the volume of the heterogeneous CSTR is defined as the equivalent volume in the gas phase of intermediates that are adsorbed on the active catalytic surface. Several reaction models are tested to determine the conditions under which a 1st-order response can be used directly to predict kinetic information useful for modeling. The relaxation time constant is obtained from the transient response of the reaction product subsequent to a step change of the reactant by using a 1st-order assumption. This result is used to examine the proposal that reaction intermediate concns. can be determined from such transient data. The reaction intermediate concentration, referred to as the postulated value, is calculated based on the aforementioned proposal. Solution of the mass balance equations yields the actual intermediate concentration which we refer to as the predicted value. The validity of a 1st-order relaxation assumption to determine intermediate concns. is analyzed by an operating line which is the locus of points along which the predicted and postulated value for the intermediate concentration are equal. The 1st-order relaxation anal. to obtain intermediate concns. is valid only under a

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limited range of exptl. conditions. For homogeneous systems, the intermediate concentration can be an overestimate or an underestimate of the actual value. For heterogeneous systems, the intermediate concentration is overestimated. In both cases, the 1st-order approximation is only valid when the dead volume is a negligible part of the total volume and the ratio of the volume to the flow rate is small. For the heterogeneous case, this implies that the perturbation in the feed stream should be made to a reactant which occupies a small fraction of the total surface. This study establishes exptl. criteria for evaluating other proposals to determine kinetic information directly from transient techniques.

L30 ANSWER 41 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1981:602933 HCAPLUS Full-text

DOCUMENT NUMBER: 95:202933

TITLE: Photochemical processes of benzophenone in microheterogeneous systems

AUTHOR(S): Braun, Andri M.; Krieg, Marianne; Turro, Nicholas J.; Aikawa, M.; Gould, I. R.; Graf, G. A.; Lee, Plate Chun Chih

CORPORATE SOURCE: Inst. Chim. Phys., Ec. Polytech. Fed. Lausanne, Lausanne, 1015, Switz.

SOURCE: Journal of the American Chemical Society (1981), 103(24), 7312-16

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The benzophenone triplet has been observed upon laser flash photolysis of the ketone solubilized in perfluorated micelles; its lifetime is found to be similar ( $7.87 \pm 10.6$  s) to the value known from expts. in perfluorobenzene and perfluoromethylcyclohexane. Its  $\tau_{1/2}$  ( $\lambda_{max}$  520 nm) of  $2660 \pm 380$  L mol<sup>-1</sup> cm<sup>-1</sup> in sodium perfluorooctanoate (SPFO) and of  $2460 \pm 350$  L mol<sup>-1</sup> cm<sup>-1</sup> in potassium perfluorooctylsulfonate have been determined by using the method of Lachish et al. and assuming  $\Phi_{isc} = 1$ . Its phosphorescence is observed in perfluorated micelles, water, isoctane, and Freon 112 with a striking resemblance of the weakly structured spectra ( $\lambda_{max}$  445 nm) in the first two systems. The emission is quenched by nonpolar surfactants such as sodium laurylsulfate (SLS) or cetyltrimethylammonium chloride, presumably due to hydrogen abstraction; phosphorescence, triplet-triplet, and ketyl radical absorption transients are observed at concns. of SLS above CMC, where the ketone should be nearly completely solubilized in a highly reactive micellar environment. Under micellar conditions, hydrogen abstraction occurs within the duration of the laser pulse (approx. 30 ns). The kinetics of the triplet decay in perfluorated micelles as well as the decay of the ketyl radical, which results from hydrogen abstraction in SLS micelles, is strictly first order. Expts. in mixed micelles of SLS and SPFO indicate a faster decay of benzophenone triplets and a greater optical d. of the signal component representing the corresponding ketyl radical when the mean occupancy number of SLS in SPFO is increased. The kinetics show a faster rate constant of hydrogen abstraction in those modeled micelles than in solns. of hydrocarbons. The solubilized ketyl radical may be deprotonated by an alkaline aqueous phase, and a cationic micelle clearly catalyzes this process. The lifetimes of ketyl radical and deprotonated ketyl radical anion are both longer in micellar systems than in homogeneous solns. due to their isolation in surfactant aggregates.

L30 ANSWER 42 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1972:86573 HCAPLUS Full-text

DOCUMENT NUMBER: 76:96573 TITLE: Organosilicon compounds as surfactants in the manufacture of polyurethane foams and as lubricants for textile fibers

INVENTOR(S): Brown, Edwin I. G.; Jack, James; Vickers, Edward J.

PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.

SOURCE: Brit., 10 pp.

CODEN: BRXXAA

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1195235	---	19700617	GB 1967-36146	19670807
FR 1581196	FR			
US 3595894		19710727	US	19680805

AB Organosilicon compds. were prepared as surfactants in the manufacture of polyurethane foams and as lubricants for synthetic fibers. Thus, a polysiloxane-polylalkylene copolymer (I), with no Si-bonded H in the mol., was prepared by treating an esterified polyether (II) with a linear polysiloxane (III) in the presence of bis(diethyl sulfide)platinous chloride. II was prepared by treating the corresponding polyoxylalkylated cyclohexanol with allyloxyacetic acid. A resilient polyurethane foam was prepared by mixing oxypolypropylated glycerol 100, tolylene diisocyanate 51, water 4, triethylenediamine 0.75, Sn octoate 0.3 and I 1 part.

L30 ANSWER 43 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1969:491936 HCAPLUS Full-text

DOCUMENT NUMBER: 71:91936

TITLE: Cupric sulfate-hydrazine-oxygen system as an initiator for the emulsion polymerization of methyl methacrylate

AUTHOR(S): Bond, Joan; Lee, Peter Ian

CORPORATE SOURCE: Univ. Salford, Salford, UK

SOURCE: Journal of Applied Polymer Science (1969), 13(6), 1215-29

CODEN: JAPNAB; ISSN: 0021-8995

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Kinetics for the emulsion polymerization of Me methacrylate (I) with  $CuSO_4$ -H<sub>2</sub>NNH<sub>2</sub> initiator and O<sub>2</sub> were studied. I (22.5 g.) was polymerized with 0.16M Na dodecyl sulfate (II) 23.0, 10-3M  $CuSO_4$  solution 8.4, 2.0M hydrazine hydrate solution 6.0, and deionized water 90.1 ml. at pH 10. Polymerization did not occur at  $<3.4 \pm 10^{-5}$  M  $CuSO_4$  concentration, above which the polymerization rate increased with  $CuSO_4$  concentration, reached a maximum at  $1.8 \pm 10^{-4}$  M, and decreased at higher concns. Decomposition of H<sub>2</sub>NNH<sub>2</sub> reached a min. at  $1 \pm 10^{-4}$  M  $CuSO_4$  or 0.04M H<sub>2</sub>NNH<sub>2</sub> and increased with  $CuSO_4$  concentration. The polymerization kinetics followed the Gersberg mechanism (D. Gersberg, 1965) with initiation occurring in the micelle, not the aqueous phase. Solution polymer occurs as a competing reaction. A I-H<sub>2</sub>NNH<sub>2</sub> interaction yielded a surfactant, enhanced polymerization rates, and increased the number of particles at high I-II concentration ratios. II caused adsorption of Cu<sup>2+</sup> on the micelles and was adsorbed on the Cu(OH)<sub>2</sub> surface to induce H<sub>2</sub>NNH<sub>2</sub> decomposition. An activation energy of 23.7 kcal./mole was calculated for the process.

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L30 ANSWER 44 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1962:409325 HCPLUS Full-text  
 DOCUMENT NUMBER: 57:9325  
 ORIGINAL REFERENCE NO.: 57:1858d-g  
 TITLE: Treating reinforcing silica  
 INVENTOR(S): Brown, Eric D.  
 PATENT ASSIGNEE(S): Dow Corning Corp.  
 SOURCE: 12 PP.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3024126	-----	19620306	US 1960-36141	19600615
DE 1158196	-----		DE	
GB 917831	-----		GB	

AB The hydrophobizing reaction of the reinforcing silica should occur in a dispersion of the compds. A, B, and C in an organic solvent: (A) silica with active surface of 150-300 sq. m./g.; (B) organosilicon, based on silane or siloxane, where B is a siloxane; there are 53 di-aliphatic-univalent-hydrocarbon- radical-substituted silicon atoms in the mol., 0.1-0.6 parts of B/part of A; (C) either (1) NH3 or amino hydrocarbons, with dissociation constant  $\geq 10^{-7}$  in dilute aqueous solution at 25°, (2) a quaternary, ammonium hydroxide, e.g.  $\text{NMe}_4\text{OH}$ , (3) a phosphoric acid salt of any basic amino compds., e.g. eicosylamine phosphate, or (4) a monocarboxylic acid salt of (a) any basic amino compound, e.g.  $\text{EtNH}_2\text{O}$  or  $\text{Bu}_3\text{N}$ , (B) any quaternary ammonium hydroxide (see 2), or (c) any one of the following metals, Pb, Sn, Ni, Co, Fe, Cd, Cr, Zn, or Mn. Maximum efficiency occurs with 0.1-0.5 parts by weight of C/100 parts of A. The compound C must be compatible with the organic solvent. A, B, and C should be dispersed in the solvent in that order. The organic solvents should be hydrocarbons, halohydrocarbons, ethers, or ketones. The organic solvent, the unreacted organosilicon compds., B, and any amine-containing compound are removed after the reaction is finished by evaporating and heating. The completely hydrophobized reinforcing silicas are useful for thermal insulation, as flattening agents in paints, and as filler in silicone rubbers, giving them excellent phys. properties (tensile strength and elongation at break).

L30 ANSWER 45 OF 45 JAPIO (C) 2006 JPO on STN  
 ACCESSION NUMBER: 2006-088058 JAPIO Full-text  
 TITLE: CATALYST CARRIER, METHOD FOR PRODUCING CATALYST CARRIER, CATALYST, METHOD FOR PRODUCING AMMONIA AND REACTOR  
 INVENTOR: AKISHIMA KENICHI; INAZU KOJI; YU YUKIO  
 PATENT ASSIGNEE(S): TOKYO INSTITUTE OF TECHNOLOGY  
 PATENT INFORMATION:

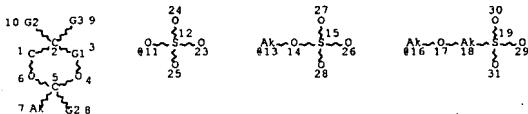
PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2006088058	A	20060406	Heisei	-----

APPLICATION INFORMATION  
 STW FORMAT: JP 2004-277564 20040924  
 ORIGINAL: JP2004277564 Heisei  
 PRIORITY APPLN. INFO.: JP 2004-277564 20040924  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2006

AN 2006-088058 JAPIO Full-text  
 AB PROBLEM TO BE SOLVED: To provide a new catalyst used for ammonia production. SOLUTION: A catalyst carrier includes 6 barium aluminate. In a method for producing a catalyst carrier, first a surfactant is dissolved in an organic solvent, water is dripped in this solution and emulsion is produced. Then, an aluminium alkoxide, a barium alkoxide and a chelating agent are dissolved in the organic solvent, this organic solvent solution is loaded into the emulsion, and the aluminium alkoxide and the barium alkoxide are hydrolyzed. Next, a crystal of hydroxide is aged at predetermined temperature for predetermined time. Thereafter, a liquid phase is removed, a hydroxide particle is separated, the surfactant is thermally decomposed and then burning is carried out at predetermined temperature for predetermined time. A catalyst carries ruthenium on a carrier. Also, an alkaline metal compound, an alkaline earth metal compound or a rare earth compound can be carried as a promoter. This catalyst is used for an ammonia synthetic reaction. COPYRIGHT: (C)2006,JPO&NCFPI

FILE 'HOME' ENTERED AT 12:24:16 ON 04 DEC 2006

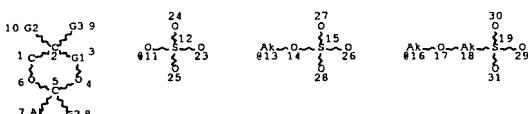
L1 > d que 14; d que 113; d his ful  
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 VAR G2=H/CH3  
 VAR G3=11/13/16/20  
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 CONNECT IS X2 RC AT 1  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE  
 L2 ( 113) SEA FILE=REGISTRY SSS FUL L1  
 L3 STR



REP G1=(0-2) CH2  
 VAR G2=H/CH3  
 VAR G3=11/13/16/20  
 NODE ATTRIBUTES:  
 CONNECT IS X2 RC AT 1  
 DEFAULT MLEVEL IS ATOM

GGCAT IS LOC AT 13  
 GGCA IS LOC AT 16  
 GGCA IS LOC AT 18  
 GGCA IS LOC AT 21  
 DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE  
 L4 113 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

L10 STR

REP G1=(0-2) CH2  
 VAR G2=H/CH3  
 VAR G3=11/13/16/20

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 DEFAULT MLEVEL IS ATOM  
 MLEVEL IS CLASS AT 7 13 16 18 21

GGCAT IS LOC AT 13  
 GGCA IS LOC AT 16  
 GGCA IS LOC AT 18  
 GGCA IS LOC AT 21  
 DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:  
 ELEVEL IS LIN ON ALL NODES  
 ALL RING(S) ARE ISOLATED

L12 55 SEA FILE=MARPAT SSS FUL L10 (MODIFIED ATTRIBUTES)  
 L13 54 SEA FILE=MARPAT ABB=ON PLU=ON L12/COMPLETE

10/516418

FILE 'REGISTRY' ENTERED AT 12:08:18 ON 04 DEC 2006  
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 L3 STR  
 L4 113 SEA SUB-L2 SSS FUL L3  
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 D QUE STAT  
 FILE 'HCAPLUS' ENTERED AT 12:08:58 ON 04 DEC 2006  
 L5 41 SEA ABB=ON PLU=ON L4  
 DEL SEL Y  
 SEL HIT L5 1-41 RN  
 D 1-41 .BEVSTR  
 FILE 'REGISTRY' ENTERED AT 12:09:58 ON 04 DEC 2006  
 L6 72 SEA ABB=ON PLU=ON (308818-13-5/B1 OR 186189-03-7/B1 OR  
 186189-06-0/B1 OR 186189-04-8/B1 OR 186189-05-9/B1 OR  
 138487-16-8/B1 OR 138487-18-0/B1 OR 139888-69-0/B1 OR  
 139888-70-3/B1 OR 139888-72-5/B1 OR 259738-92-6/B1 OR  
 259738-94-8/B1 OR 138487-17-9/B1 OR 143482-00-2/B1 OR  
 143482-02-4/B1 OR 251453-51-7/B1 OR 259738-90-4/B1 OR  
 259738-91-5/B1 OR 259738-93-7/B1 OR 259738-95-9/B1 OR  
 259738-96-0/B1 OR 259738-97-1/B1 OR 308818-10-2/B1 OR  
 308818-11-3/B1 OR 308818-14-6/B1 OR 333952-53-7/B1 OR  
 333952-54-8/B1 OR 333952-55-9/B1 OR 113296-62-7/B1 OR  
 127244-79-5/B1 OR 139888-71-0/B1 OR 141186-39-2/B1 OR  
 143481-99-6/B1 OR 147182-01-3/B1 OR 186189-01-5/B1 OR  
 186189-02-1/B1 OR 186302-98-1/B1 OR  
 186302-99-0/B1 OR 197294-67-0/B1 OR 197294-68-1/B1 OR  
 197294-69-2/B1 OR 197294-70-5/B1 OR 223537-63-1/B1 OR  
 251453-53-9/B1 OR 251453-54-0/B1 OR 261963-60-4/B1 OR  
 308818-15-7/B1 OR 308818-17-9/B1 OR 311820-40-1/B1 OR  
 37939-05-0/B1 OR 38340-02-2/B1 OR 38340-22-6/B1 OR  
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 512203-84-8/B1 OR 512203-86-0/B1 OR 512203-89-3/B1 OR  
 512204-29-4/B1 OR 57413-41-9/B1 OR 59263-70-4/B1 OR  
 59263-79-5/B1 OR 84833-16-1/B1 OR 84834-19-5/B1 OR  
 84846-66-2/B1 OR 879551-03-8/B1 OR 879551-05-0/B1 OR  
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 911829-70-4/B1  
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 D 1-72 REG  
 D 1, 5, 7, 8, 14, 17, 18, 24, 25, 33, 36, 37, 41, 44, 50, 53-55, 59, 62-67, 6

FILE 'CAGLD' ENTERED AT 12:13:23 ON 04 DEC 2006  
 L7 0 SEA ABB=ON PLU=ON L6  
 FILE 'USPATFULL' ENTERED AT 12:13:33 ON 04 DEC 2006  
 L8 5 SEA ABB=ON PLU=ON L6  
 D 1-5 IBI BABS  
 FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 12:13:42 ON 04 DEC 2006  
 L9 0 SEA ABB=ON PLU=ON L6  
 FILE 'MARPAT' ENTERED AT 12:13:47 ON 04 DEC 2006  
 L10 STR L3

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10/516418

L11 3 SEA SSS SAM L10 (MODIFIED ATTRIBUTES)  
 L12 55 SEA SSS FUL L10 (MODIFIED ATTRIBUTES)  
 L13 54 SEA ABB=ON PLU=ON L12/COMPLETE  
 D QUE STAT  
 D 1-54 .BEVMAR1  
 FILE 'HCAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-PLUS, JAPIO' ENTERED AT 12:15:41 ON 04 DEC 2006  
 L14 162 SEA ABB=ON PLU=ON "BOUVIER E?"/AU  
 L15 269 SEA ABB=ON PLU=ON ("COPTON B?" OR "COMPTON B?")/AU  
 L16 449 SEA ABB=ON PLU=ON "GEBLER J?"/AU  
 L17 191 SEA ABB=ON PLU=ON "GILAR M?"/AU  
 L18 27791 SEA ABB=ON PLU=ON ("YU Y?" OR "YING Y?")/AU  
 L19 25309 SEA ABB=ON PLU=ON "LEE P?"/AU  
 L20 17049 SEA ABB=ON PLU=ON "BROWN E?"/AU  
 L21 2 SEA ABB=ON PLU=ON L14 AND L15 AND L16 AND L17 AND L18  
 AND L19 AND L20  
 L22 37 SEA ABB=ON PLU=ON L14 AND (L15 OR L16 OR L17 OR L18 OR  
 L19 OR L20)  
 L23 16 SEA ABB=ON PLU=ON L15 AND (L16 OR L17 OR L18 OR L19 OR  
 L20)  
 L24 115 SEA ABB=ON PLU=ON L16 AND (L17 OR L18 OR L19 OR L20)  
 L25 32 SEA ABB=ON PLU=ON L17 AND (L19 OR L20 OR L18)  
 L26 45 SEA ABB=ON PLU=ON L18 AND (L19 OR L20)  
 L27 10 SEA ABB=ON PLU=ON L19 AND L20  
 L28 53 SEA ABB=ON PLU=ON (L22 OR L24 OR L25 OR L26 OR L14 OR  
 L15 OR L16 OR L17 OR L18 OR L19 OR L20) AND (SURFACTANT OR  
 SURFACE(LA) ACTIVE(L) (REACT? OR RAN))  
 L29 73 SEA ABB=ON PLU=ON L21 OR L23 OR L27 OR L28  
 L30 45 DUP L29 (2 DUPLICATES REMOVED)  
 SET REN ON  
 D 1-45 IBI BABS  
 FILE 'HOME' ENTERED AT 12:24:16 ON 04 DEC 2006  
 D QUE L4  
 D QUE L13  
 FILE REGISTRY  
 Property values tagged with IC are from the ZIC/VINICI data file  
 provided by InfoChem.  
 STRUCTURE FILE UPDATES: 3 DEC 2006 HIGHEST RN 914612-67-2  
 DICTIONARY FILE UPDATES: 3 DEC 2006 HIGHEST RN 914612-67-2  
 New CAS Information Use Policies, enter HELP USAGETERMS for details.  
 TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006  
 Please note that search-term pricing does apply when  
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 REGISTRY includes numerically searchable data for experimental and  
 predicted properties as well as tags indicating availability of  
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<http://www.cas.org/ONLINE/UG/regprops.html>  
 FILE HCAPLUS  
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FILE COVERS 1907 - 4 Dec 2006 VOL 145 ISS 24  
 FILE LAST UPDATED: 3 Dec 2006 (20061203/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate  
 substance identification.

FILE CAGLD  
 FILE COVERS 1907-1966  
 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate  
 substance identification. Title keywords, authors, patent  
 assignees, and patent information, e.g., patent numbers, are  
 now searchable from 1907-1966. TIFF images of CA abstracts  
 printed between 1907-1966 are available in the PAGE  
 display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of  
 all substance data from the REGISTRY file. Enter HELP FIRST for  
 more information.

FILE USPATFULL  
 FILE COVERS 1971 TO PATENT PUBLICATION DATE: 30 Nov 2006 (20061130/PD)  
 FILE LAST UPDATED: 30 Nov 2006 (20061130/ED)  
 HIGHEST GRANTED PATENT NUMBER: US7143445  
 HIGHEST APPLICATION PUBLICATION NUMBER: US2006272066  
 CA INDEXING IS CURRENT THROUGH 28 Nov 2006 (20061128/UPCA)  
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 30 Nov 2006 (20061130/PD)  
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006  
 USPTO MANUAL OF CLASSIFICATIONS THESSAURUS ISSUE DATE: Jun 2006

FILE MEDLINE  
 FILE LAST UPDATED: 2 Dec 2006 (20061202/UP). FILE COVERS 1950 TO DAT  
 It preparation for the annual MEDLINE reload, the National Library o  
 Medicine (NLM) has suspended delivery of regular updates as of Novem  
 ber 15, 2006. In-process and in-data-review records will resume deliver  
 on November 21, 2006, and will continue to be added to MEDLINE until  
 December 17, 2006.

On December 17, 2006, all regular MEDLINE updates from November 15 t  
 December 16 will be added to MEDLINE, along with 2007 Medical Subjec  
 Headings (MeSH(R)) and 2007 tree numbers.

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The annual reload will be available in early 2007.

This file contains CAS Registry Numbers for easy and accurate  
 substance identification.

FILE BIOSIS  
 FILE COVERS 1969 TO DATE.  
 CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
 FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 29 November 2006 (20061129/ED)

FILE EMBASE  
 FILE COVERS 1974 TO 4 Dec 2006 (20061204/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default)  
 and biweekly.

This file contains CAS Registry Numbers for easy and accurate  
 substance identification.

FILE MARPAT  
 FILE CONTENT: 1961-PRESENT VOL 145 ISS 22 (20061201/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES  
 (COVERAGE FOR THESE DATES IS NOT COMPLETE):

US 20060234956 19 OCT 2006  
 DE 102005016345 12 OCT 2006  
 EP 1710237 11 OCT 2006  
 JP 2006282618 19 OCT 2006  
 WO 2006108979 19 OCT 2006  
 GB 2424583 04 OCT 2006  
 FR 2884252 13 OCT 2006  
 RU 2284857 10 OCT 2006  
 CA 2500558 10 SEP 2006

Expanded G-group definition display now available.

FILE WPIDS  
 FILE LAST UPDATED: 29 NOV 2006 <20061129/UP>  
 MOST RECENT THOMSON SCIENTIFIC UPDATE: 200677 <200677/DW>  
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE  
 >>> YOU ARE IN THE NEW AND ENHANCED DERWENT WORLD PATENTS INDEX <<<  
 >>> FOR DETAILS ON THE NEW AND ENHANCED DERWENT WORLD PATENTS INDEX  
 PLEASE VISIT:  
[http://www.stn-international.de/stndatabases/details/dwpi\\_r.html](http://www.stn-international.de/stndatabases/details/dwpi_r.html) <<<

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 PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf)

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FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

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[http://www.stn-international.de/stndatabases/details/IPC\\_reform.html](http://www.stn-international.de/stndatabases/details/IPC_reform.html) &  
[http://scientific.thomson.com/media/acpdf/IPC\\_DWPi.pdf](http://scientific.thomson.com/media/acpdf/IPC_DWPi.pdf)

>>> FOR DETAILS ON THE NEW AND ENHANCED DERWENT WORLD PATENTS INDEX  
PLEASE SEE  
[<<<](http://www.stn-international.de/stndatabases/details/dwpi_r.html)

>>> YOU ARE IN THE NEW AND ENHANCED DERWENT WORLD PATENTS INDEX <<<

FILE CONFSCI  
FILE COVERS 1973 TO 14 Nov 2006 (20061114/ED)

CSA has resumed updates, see NEWS FILE

FILE SCISEARCH

FILE COVERS 1974 TO 30 Nov 2006 (20061130/ED)

SCISEARCH has been reloaded, see HELP RELOAD for details.

FILE JICST-EPLUS  
FILE COVERS 1985 TO 27 NOV 2006 (20061127/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE JAPIO  
FILE LAST UPDATED: 20 NOV 2006 <20061120/UP>  
FILE COVERS APRIL 1973 TO JULY 27, 2006

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOW AVAILABLE IN FILE JAPIO.  
SEE HELP CHANGE  
AND  
[<](http://www.stn-international.de/stndatabases/details/IPC_reform.html)

FILE HOME